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standard contents

every issue does not necessarily contain all these contents, but they are the regular features which continually recur.

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Architectural Appointments Wanted and Vacant

No. 2889] [VOL. 111
THE ARCHITECTURAL PRESS
9, 11 *and* 13, *Queen Anne's Gate, Westminster, S.W.*1. *'Phone: Whitehall* 0611

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Registered as a Newspaper.

★ A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their full address and telephone numbers. The glossary is published in two parts—A to Ic one week, Ie to Z the next. In all cases where the town is not mentioned the word LONDON is implicit in the address.

AA	Architectural Association, 34/6, Bedford Square, W.C.1.	Museum 0974
AAI	Association of Art Institutions. Secy.: W. Marlborough Whitehead, "Dyneley," Castle Hill Avenue, Berkhampstead, Herts.	
ABS	Architects' Benevolent Society. 66, Portland Place, W.1.	Langham 5721
ABT	Association of Building Technicians. 5, Ashley Place, S.W.1.	Victoria 0447-8
ACGB	Arts Council of Great Britain. 4, St. James' Square, S.W.1.	Whitehall 9737
ADA	Aluminium Development Association. 33, Grosvenor Street, W.1.	Mayfair 7501/8
APRR	Association for Planning and Regional Reconstruction. 34, Gordon Square, W.C.1.	Euston 2158-9
ArchSA	Architectural Students' Association. Department of Architecture, School of Building, Ferndale Road, Brixton, S.W.4.	Brixton 7048
ARCUK	Architects' Registration Council. 68, Portland Place, W.1.	Welbeck 9738
ASB	Architectural Science Board of the Royal Institute of British Architects. 66, Portland Place, W.1.	Langham 5721
AScW	Association of Scientific Workers. 15, Half Moon Street, Piccadilly, W.1.	Grosvenor 4761
BAE	Board of Architectural Education. 66, Portland Place, W.1.	Langham 5721
BATC	Building Apprenticeship and Training Council. Lambeth Bridge House, S.E.1.	Reliance 7611, Ext. 1706
BC	Building Centre. 9, Conduit Street, W.1.	Mayfair 8641/6
BCC	British Colour Council. 13, Portman Square, W.1.	Welbeck 4185
BCCF	British Cast Concrete Federation. 17 Amherst Road, Ealing, W.13.	Perivale 6869
BCIRA	British Cast Iron Research Association. Alvechurch, Birmingham.	Redditch 716
BDA	British Door Association. 10, The Boltons, S.W.10.	Flaxman 7766
BEDA	British Electrical Development Association 2, Savoy Hill, W.C.2.	Temple Bar 9434
BGF	British Gas Federation. 1, Grosvenor Place, S.W.1.	Sloane 8266
BIA	British Ironfounders' Association. 145, Vincent Street, Glasgow, C.2.	Glasgow Central 2891
BIAE	British Institute of Adult Education. 29, Tavistock Square, W.C.1.	Euston 5385
BID	Building Industries Distributors. 52, High Holborn, W.C.1.	Chancery 7772
BINC	Building Industries National Council. 11, Weymouth Street, W.1.	Langham 2785
BOT	Board of Trade. Millbank, S.W.1.	Whitehall 5140
BRS	Building Research Station. Bucknalls Lane, Watford.	Garston 2246
BSA	Building Societies Association. 14, Park Street, W.1.	Mayfair 0515
BSI	British Standards Institution. 28, Victoria Street, S.W.1.	Abbey 3333
BTE	Building Trades Exhibition. 4, Vernon Place, W.C.1.	Holborn 8146/7
CABAS	City and Borough Architects Society. C/o Johnson Blackett, F.R.I.B.A., Borough Architect, Town Hall, Newport, Mon.	Newport 3111
CAS	County Architects Society. C/o A. Guy Chant, F.R.I.B.A., Salop County Council, 5, Belmont, Shrewsbury.	Shrewsbury 3031
CCA	Cement and Concrete Association. 52, Grosvenor Gardens, S.W.1.	Sloane 5255
CDA	Copper Development Association. Kendals Hall, Radlett, Herts.	Radlett 5616
CIAD	Central Institute of Art and Design. 41, 42, Dover Street, W.1.	Regent 3074
CIAM	Congrès Internationaux d'Architecture Moderne. Doldertal, 7. Zurich, Switzerland.	
CID	Council of Industrial Design. Tilbury House, Petty France, S.W.1.	Whitehall 6322
CPC	Codes of Practice Committee. MOW, 42, Onslow Gardens, S.W.7.	Kensington 8161
CPRE	Council for the Preservation of Rural England. 4, Hobart Place, S.W.	Sloane 4280
CUJC	Coal Utilization Joint Council. 13, Grosvenor Gardens, London, S.W.1.	Victoria 1534
DGW	Directorate General of Works, Ministry of Works, Lambeth Bridge House, S.E.1.	Reliance 1761
DIA	Design and Industries Association. 13, Suffolk Street, S.W.1.	Whitehall 0540
DOT	Department of Overseas Trade. 35, Old Queen Street, S.W.1.	Victoria 9040
EJMA	English Joinery Manufacturers' Association (Incorporated). Sackville House, 40, Piccadilly, W.1.	Regent 4448
EPNS	English Place-Name Society. 7, Selwyn Gardens, Cambridge.	
FAS	Faculty of Architects and Surveyors. 8, Buckingham Palace Gdns., S.W.1.	Sloane 2837
FB 1951	Festival of Britain 1951. 2, Savoy Court, Strand, W.C.2.	Waterloo 1951
FASSC	Federation of Association of Specialists and Sub-Contractors. 21, Tothill Street, S.W.1.	Whitehall 9696
FBI	Federation of British Industries. 21, Tothill Street, S.W.1.	Whitehall 6711
FC	Forestry Commission. 25, Savile Row, W.1.	
FCMI	Federation of Coated Macadam Industries. 37, Chester Square, S.W.1.	Sloane 1002
FDMA	The Flush Door Manufacturers Association Ltd. Trowell, Nottingham.	Ilkeston 623
FLD	Friends of the Lake District. Pennington House, nr. Ulverston, Lancs.	Ulverston 201
FMB	Federation of Master Builders. 26, Great Ormond Street, Holborn, W.C.1.	Chancery 7583
FRHB	Federation of Registered House Builders. 82, New Cavendish Street, W.1.	Langham 4041
FS (Eng.)	Faculty of Surveyors of England. 8, Buckingham Palace Gdns., S.W.1.	Sloane 2837
GG	Georgian Group. 27, Grosvenor Place, S.W.1.	Sloane 2844
HC	Housing Centre. 13, Suffolk Street, Pall Mall, S.W.1.	Whitehall 2881
IAAS	Incorporated Association of Architects and Surveyors. 75, Eaton Place, S.W.1.	Sloane 5615
ICE	Institution of Civil Engineers. Great George Street, S.W.1.	Whitehall 4577



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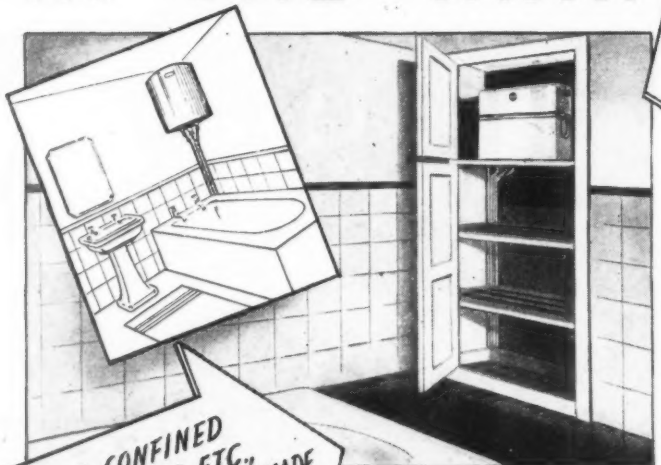
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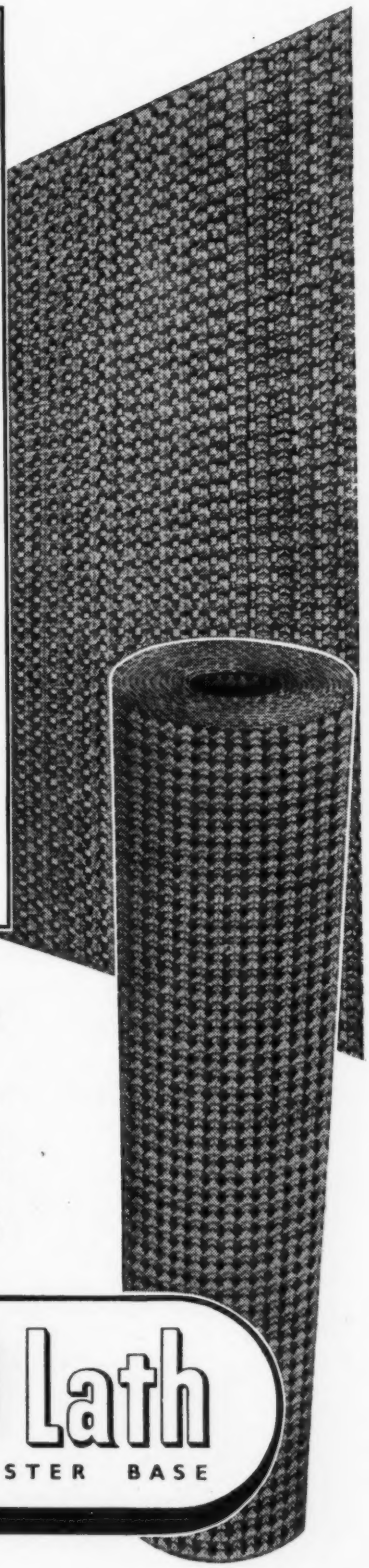
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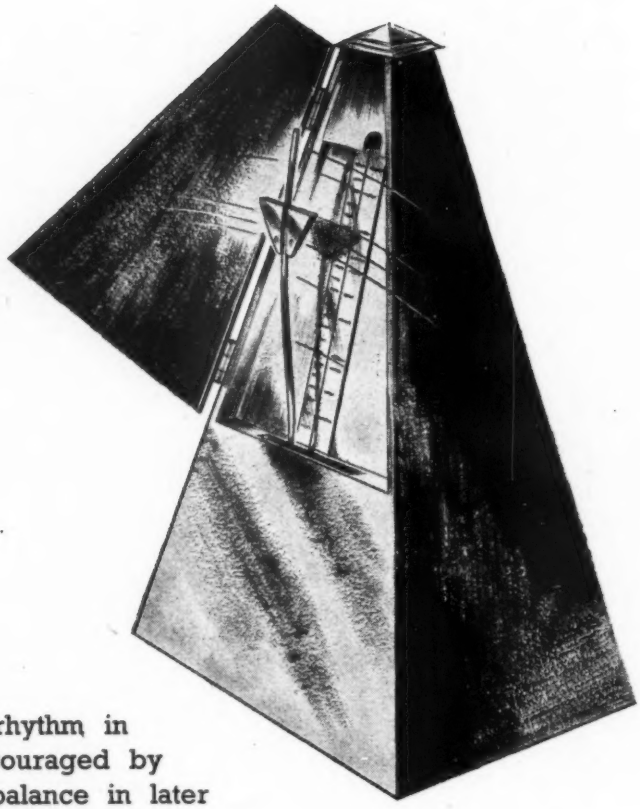
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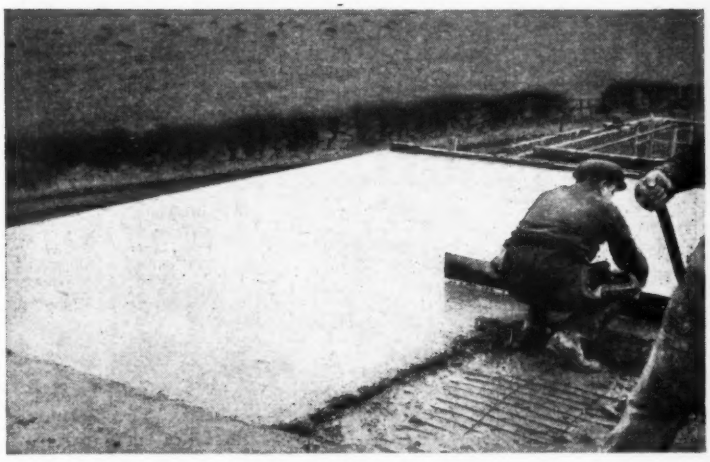
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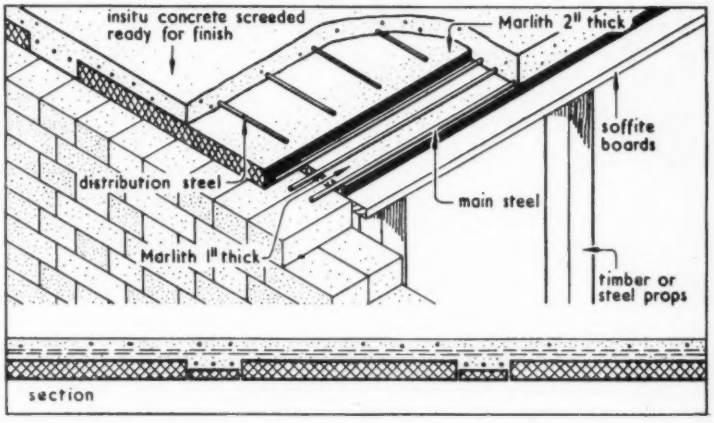
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NTRACTORS : Messrs. Jaram & Son, 20A Gladstone Street, rborough.
THORITY : North Riding Education Committee, Northallerton



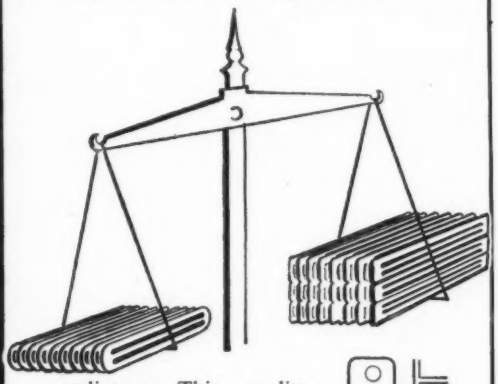


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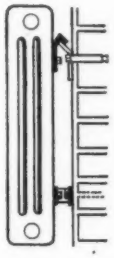
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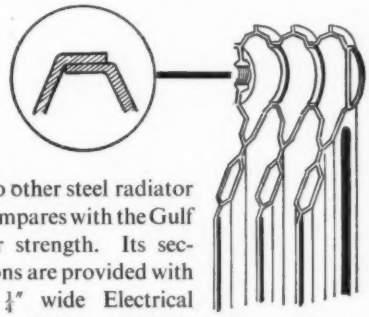
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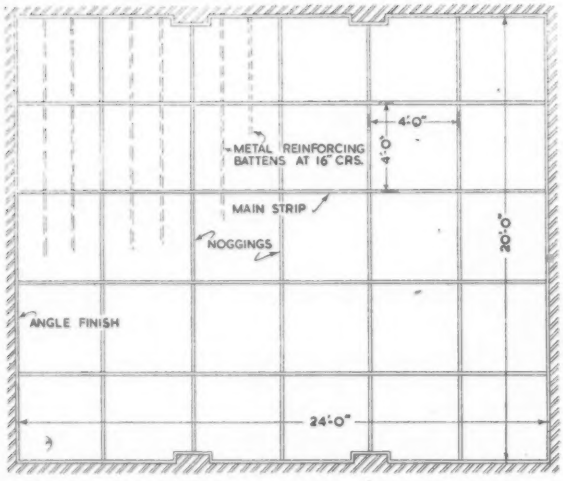
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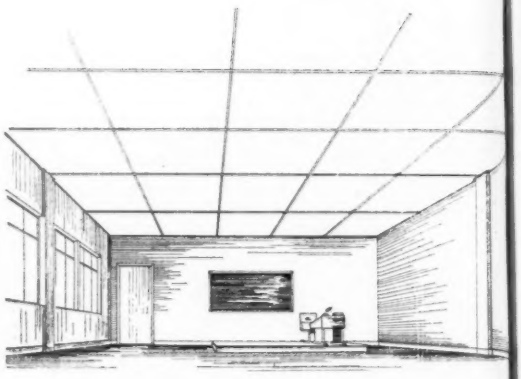
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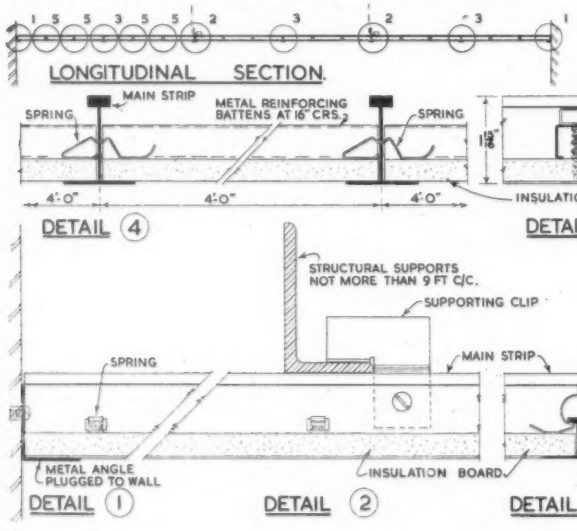
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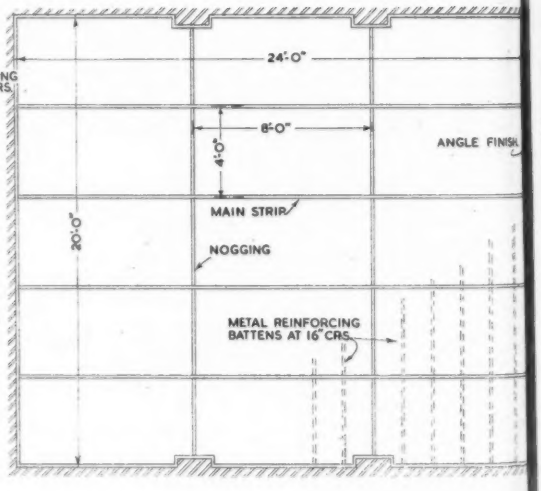
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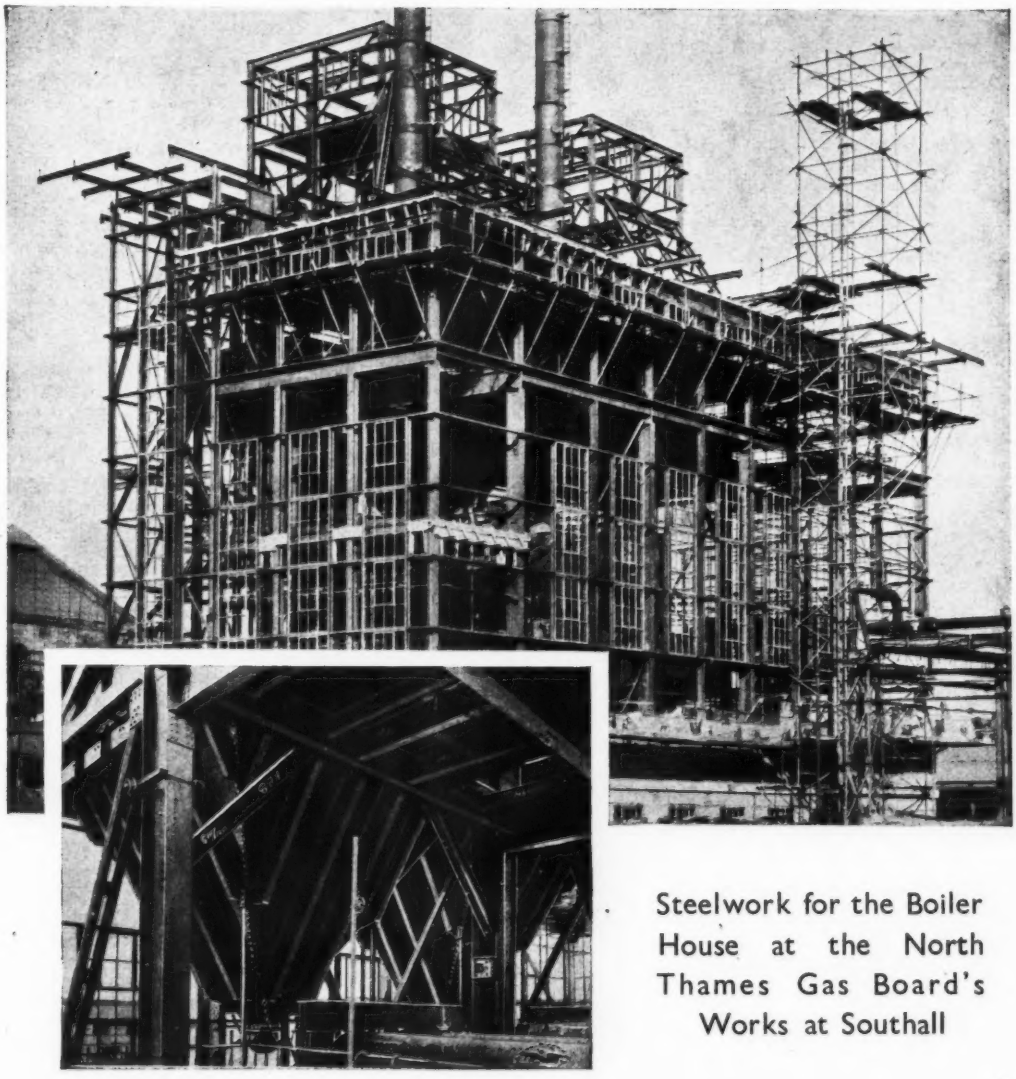
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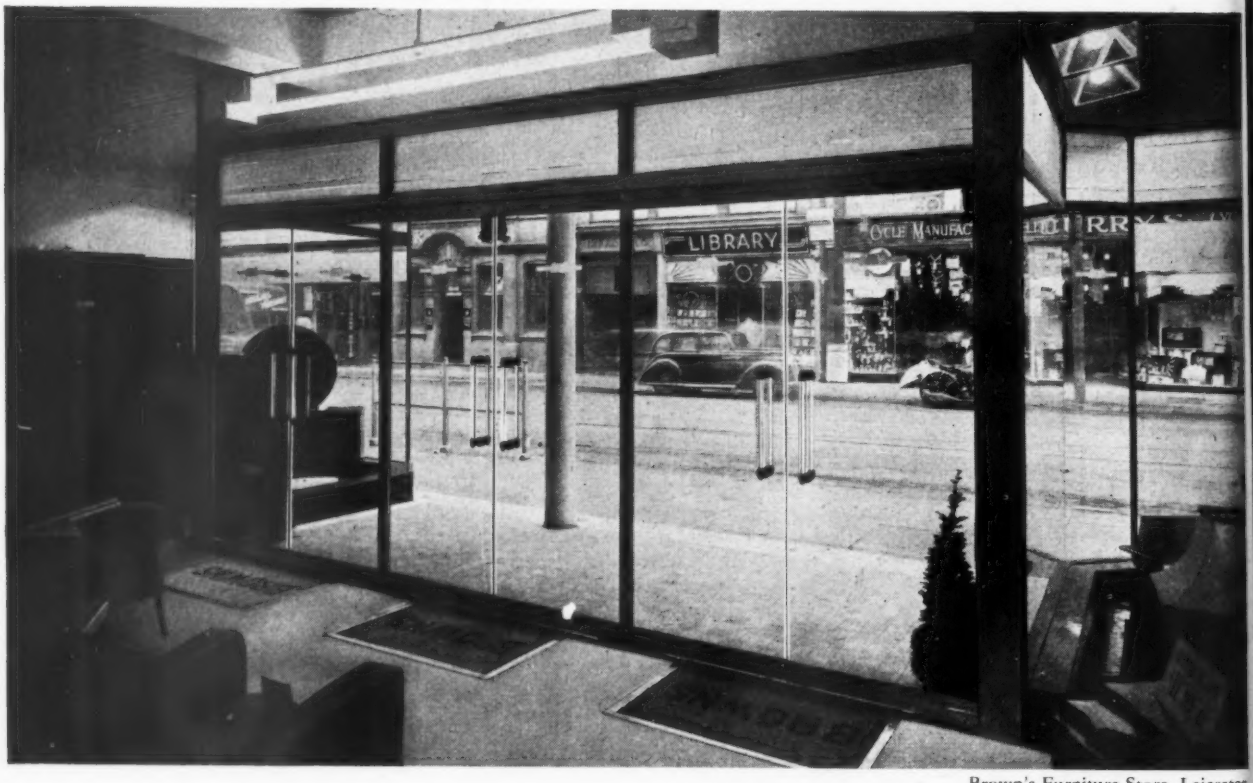
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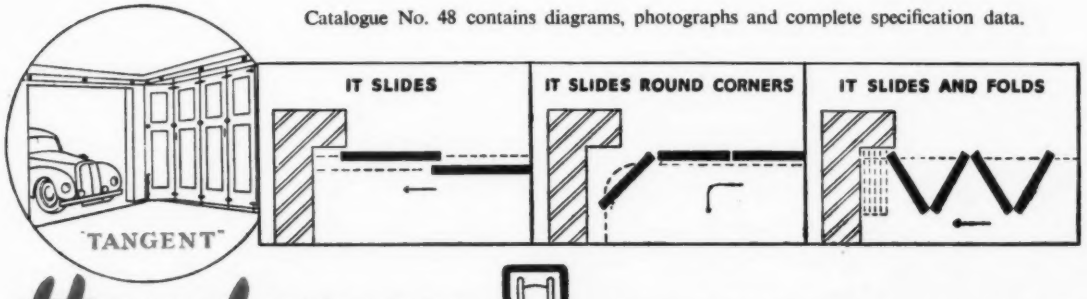
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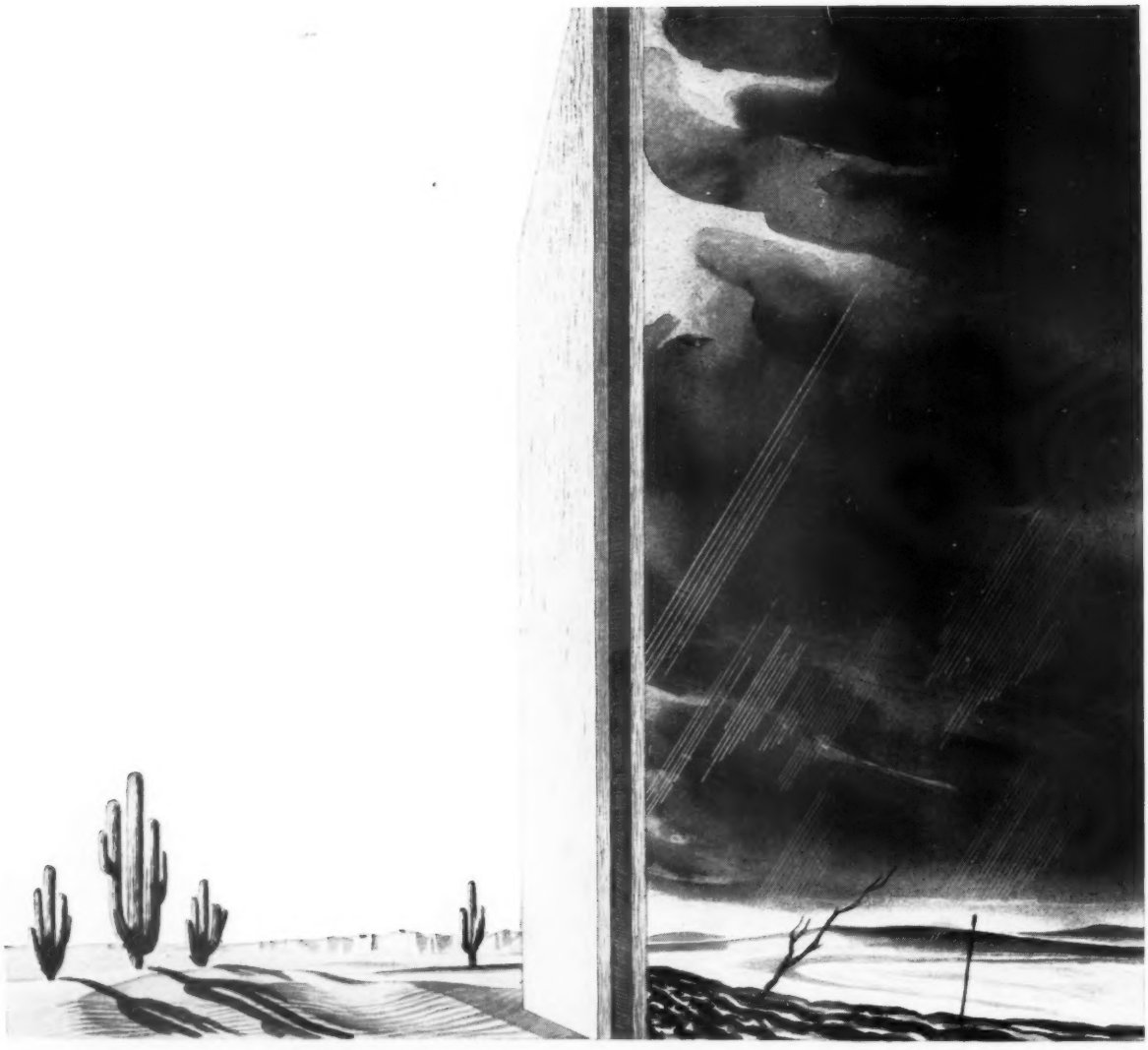


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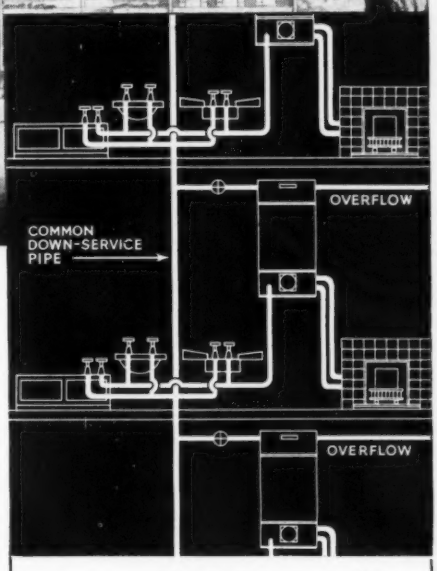
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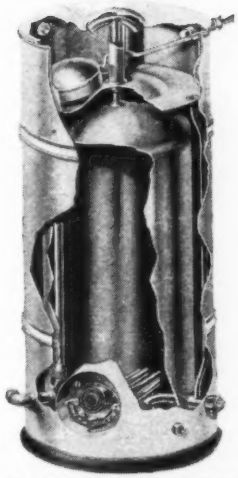
PROGRESSIVE HOUSING AUTHORITIES are installing Sadia coal-electric water heaters because they give tenants a really efficient hot water system, and at the same time the lowest possible running costs. The coal-electric Sadia is not only suitable for blocks of flats, but for houses of every type, and for old houses that are being converted into flats.

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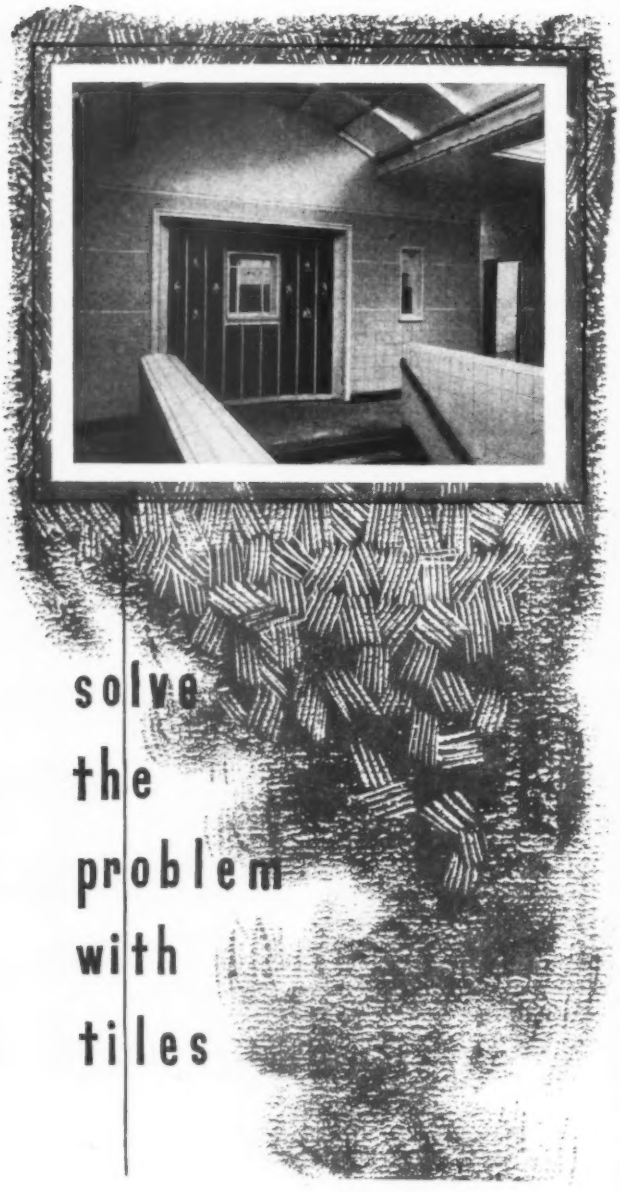
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It is the Trade Mark of the Flush Door Manufacturers Association Ltd., it may only be used by members who are registered users of the Trade Mark, and it is stamped on all doors made to the Association's Standard Specification. It is your guarantee that the materials and construction of the core of the door are up to a minimum standard as set out in the official F.D.M.A. Standard Flush Door Specification.

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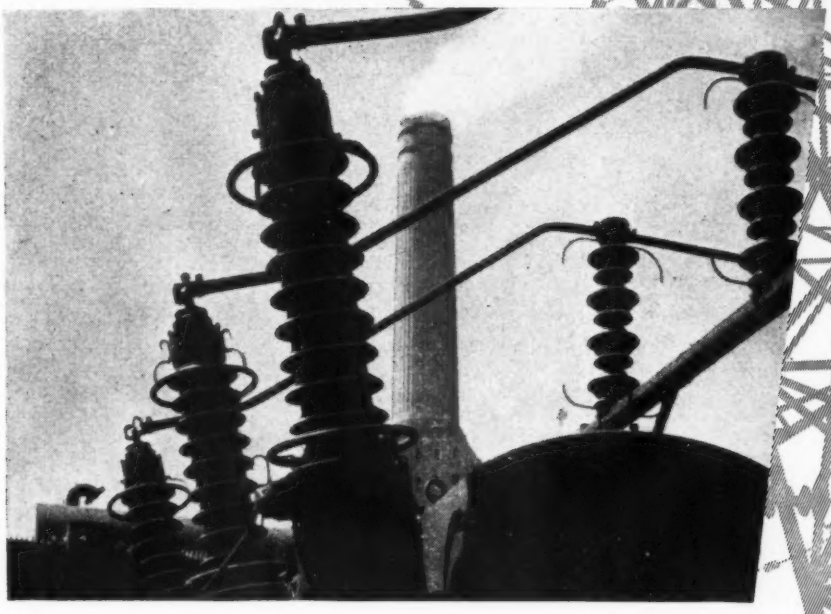
FLUSH DOOR MANUFACTURERS' ASSOCIATION LTD.

Full details of the Association's Doors are obtainable from any of the following Members, or the Secretary at Trowell.

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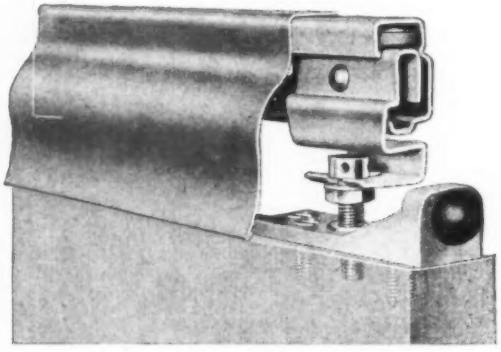
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(Supplied through Messrs. Hayward & Tourell, Ltd., Wholesale Ironmongers, North Street, Peterborough)

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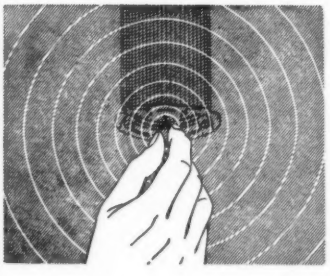
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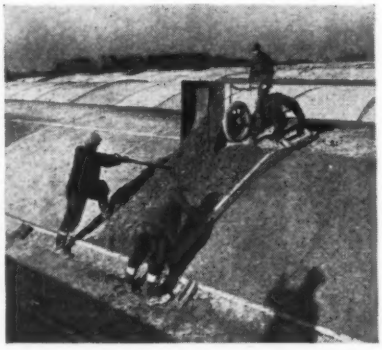
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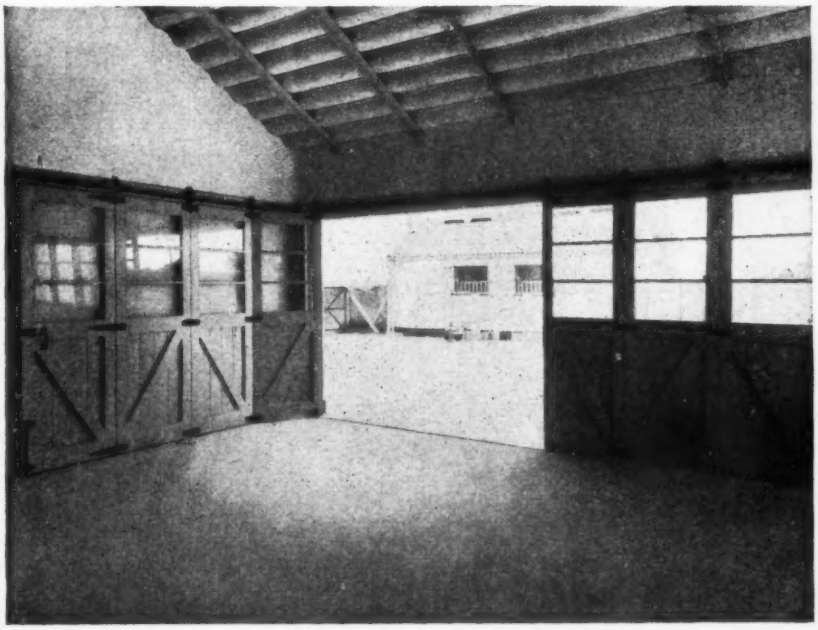
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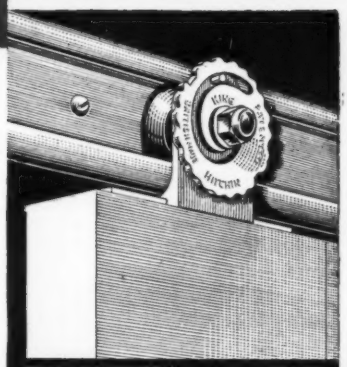
These illustrations, whilst showing some of the many applications of KING Sliding Door Gear, are but a few of the systems and types of Sliding Door Gear available in the KING Range of Door Fittings. We welcome all enquiries and our technical staff is always at your service. Should your particular requirements not be shown, please get in touch with us for details of our many other types of Sliding Door Gear.

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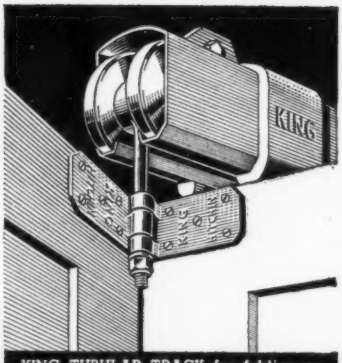




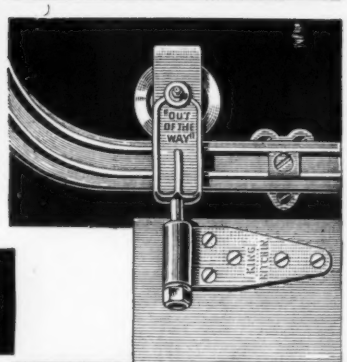
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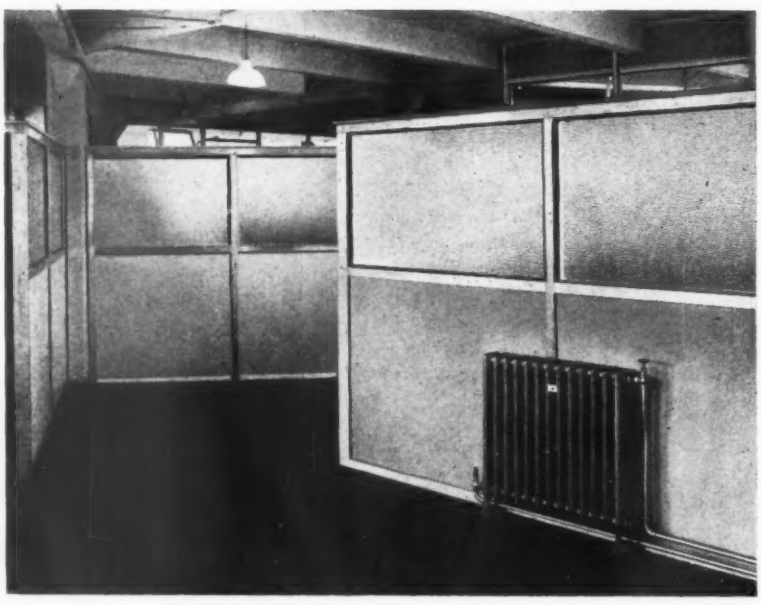
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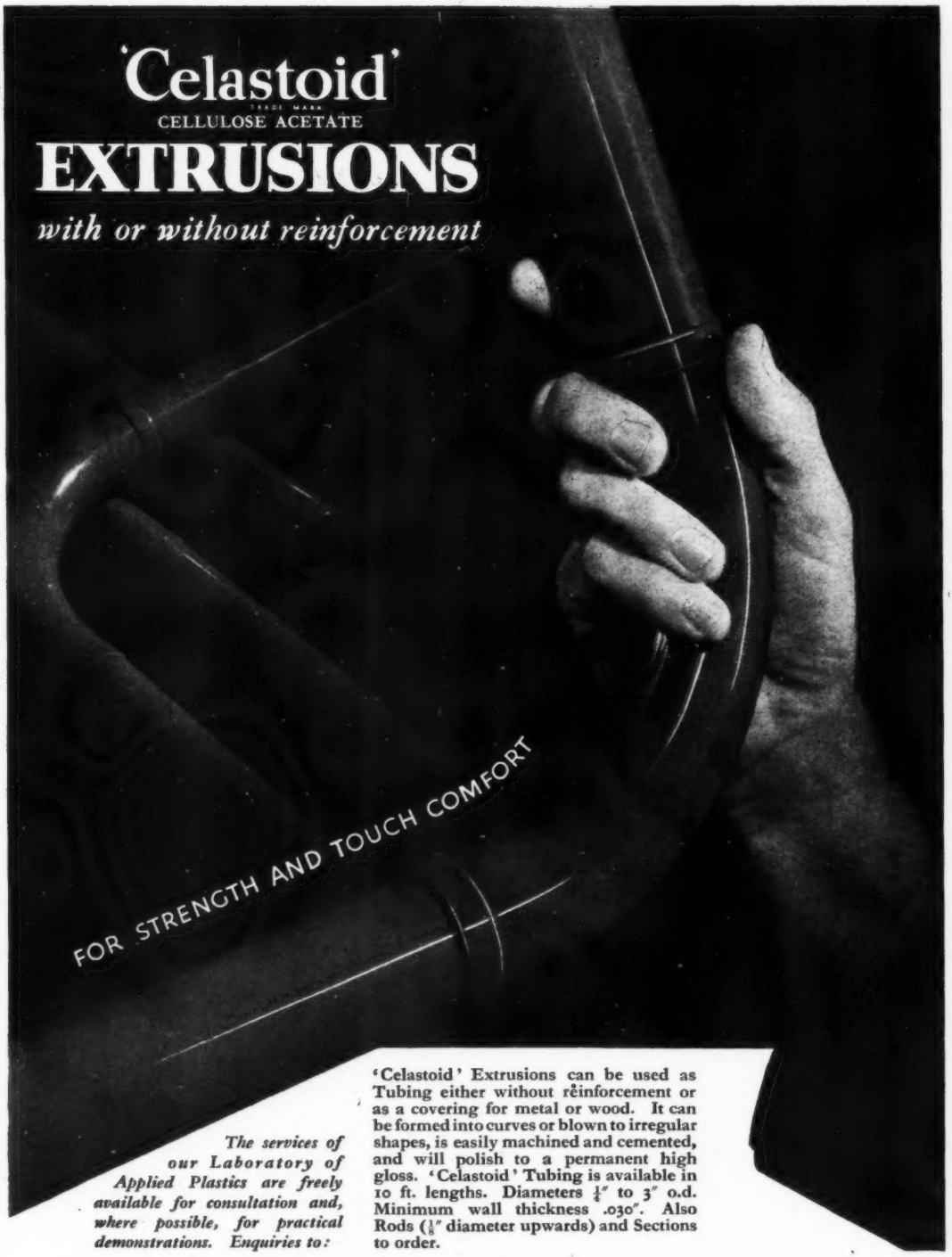
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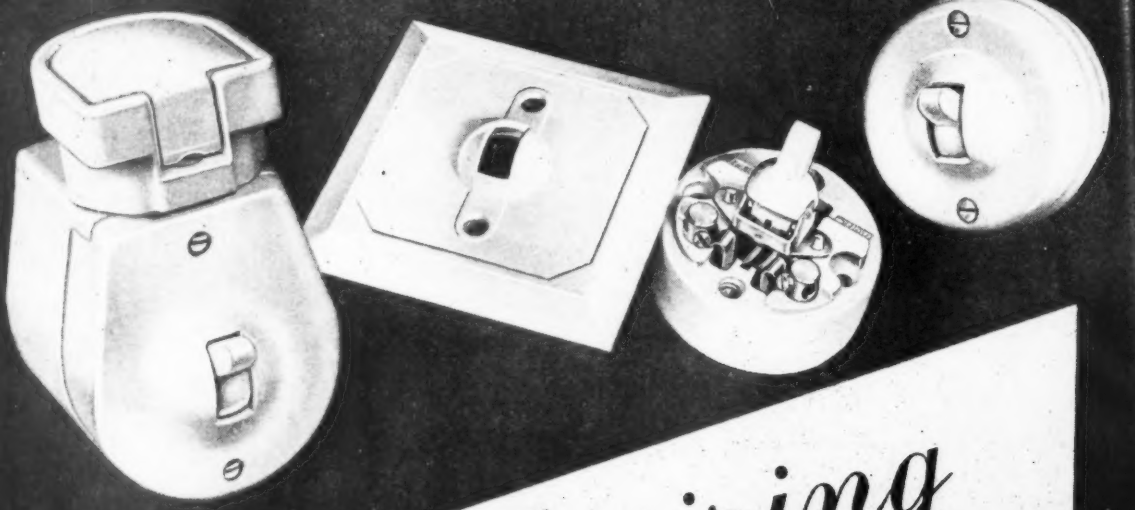
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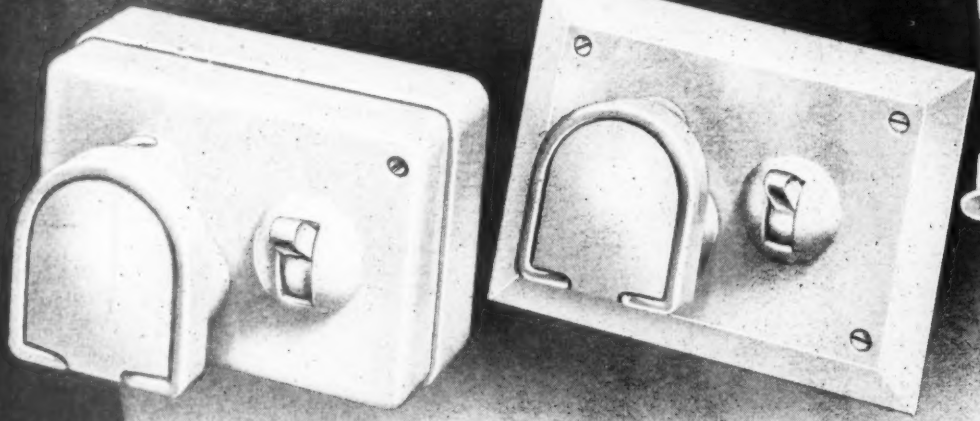
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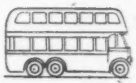
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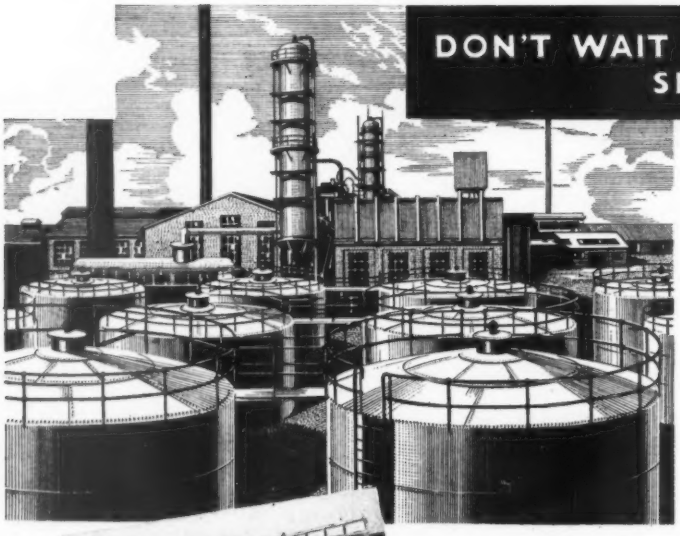
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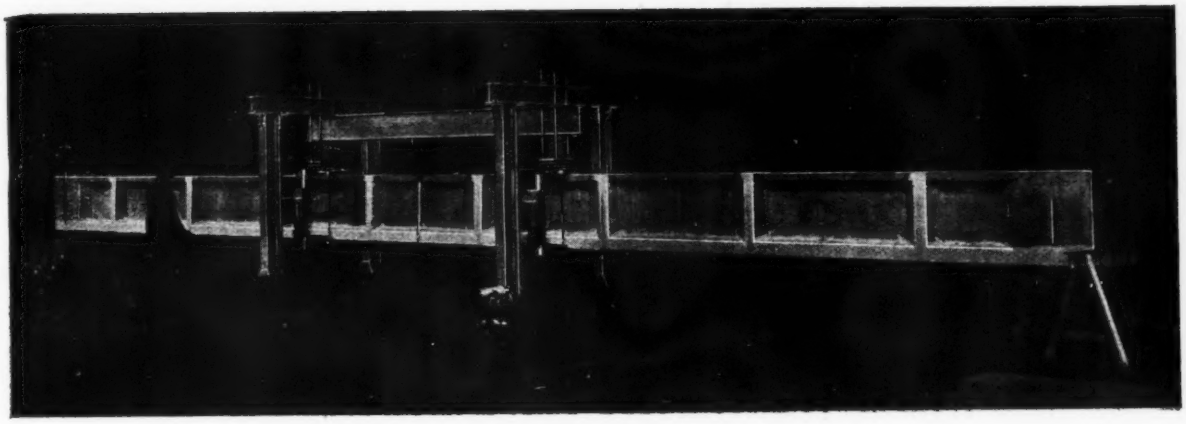
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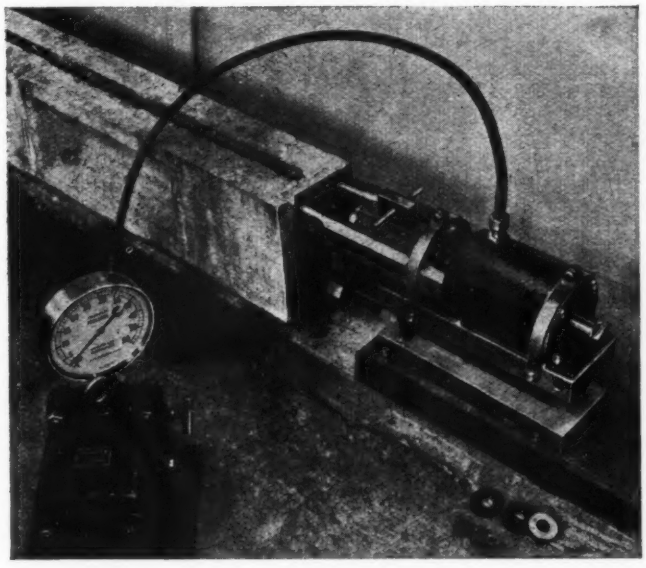
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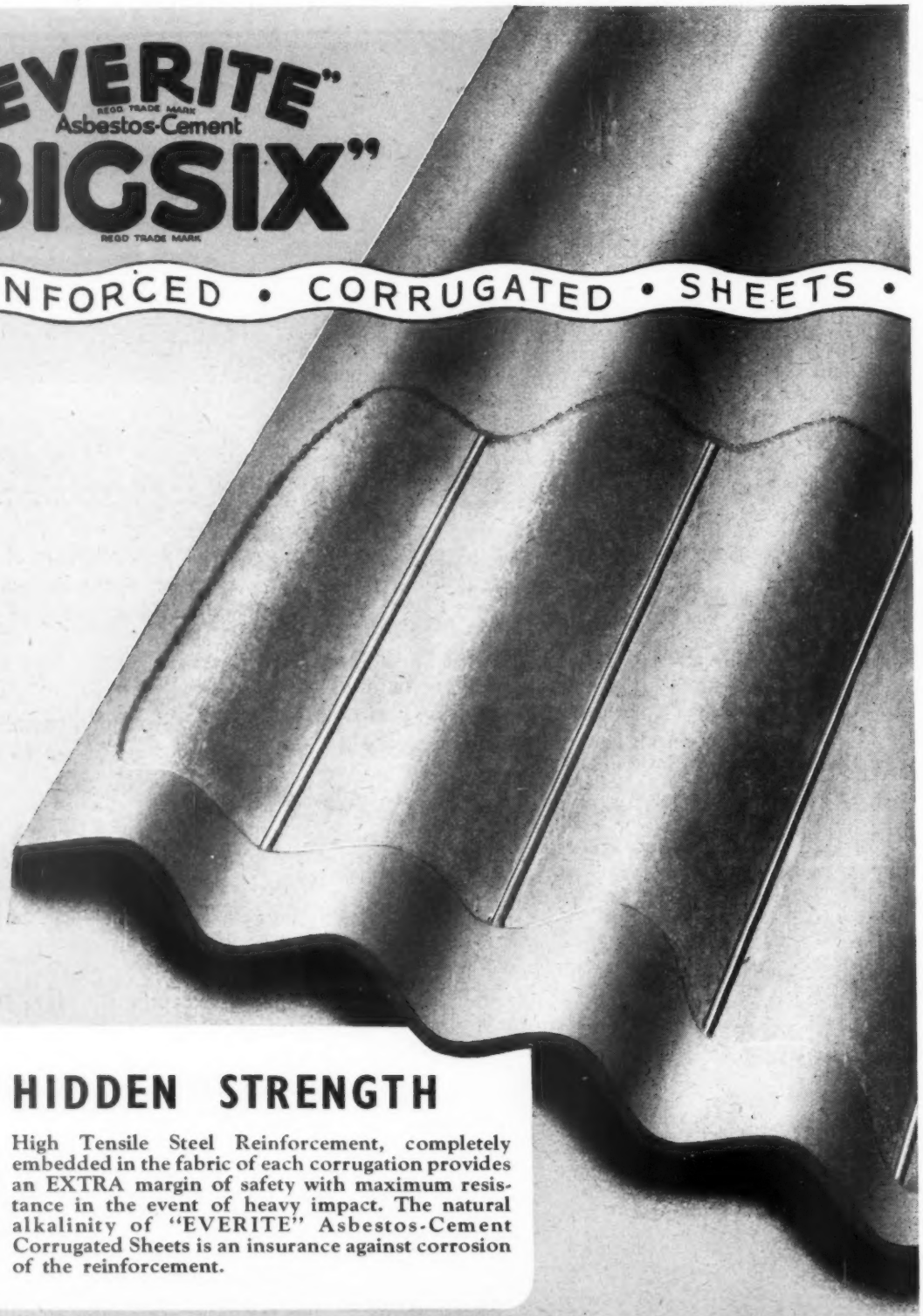
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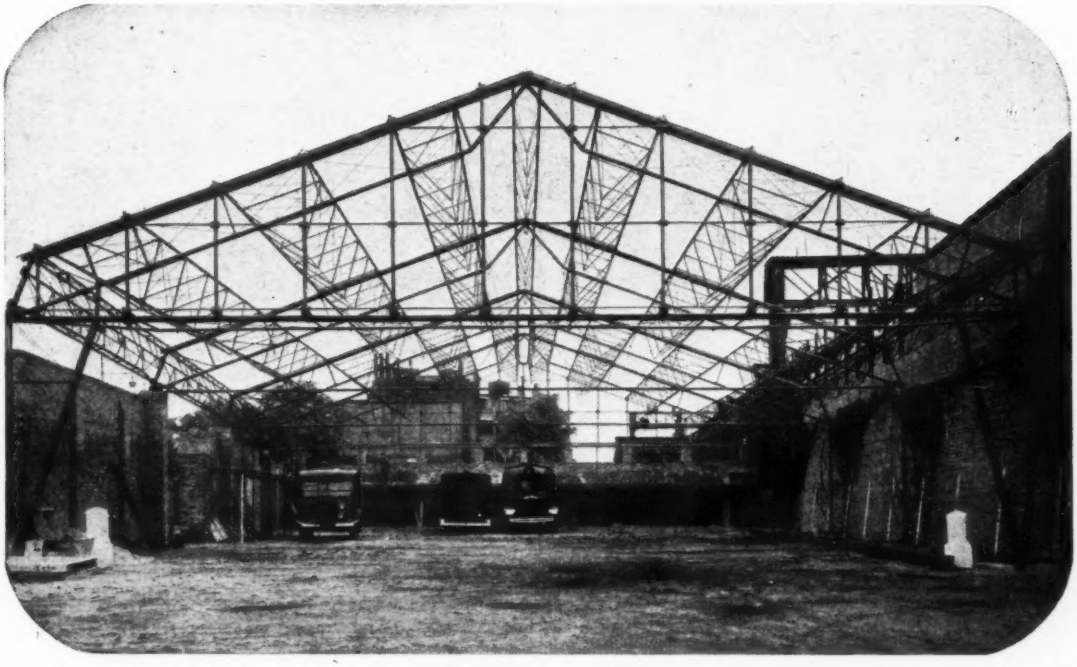
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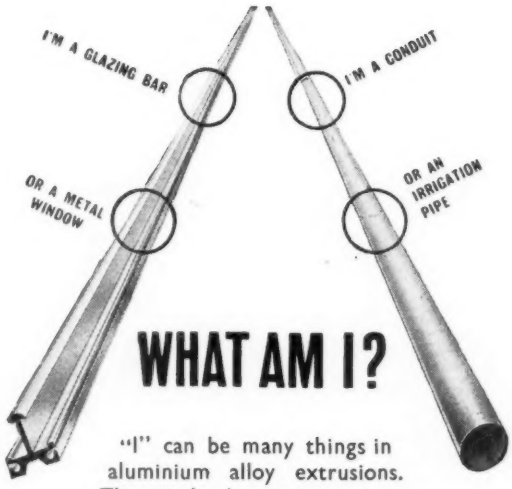


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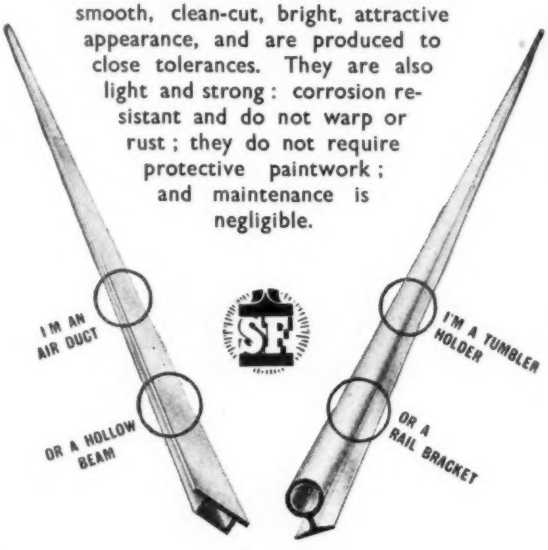
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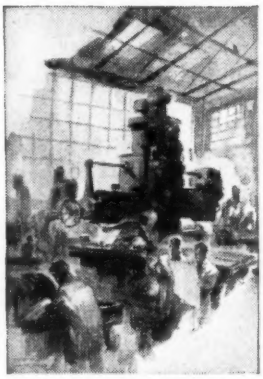
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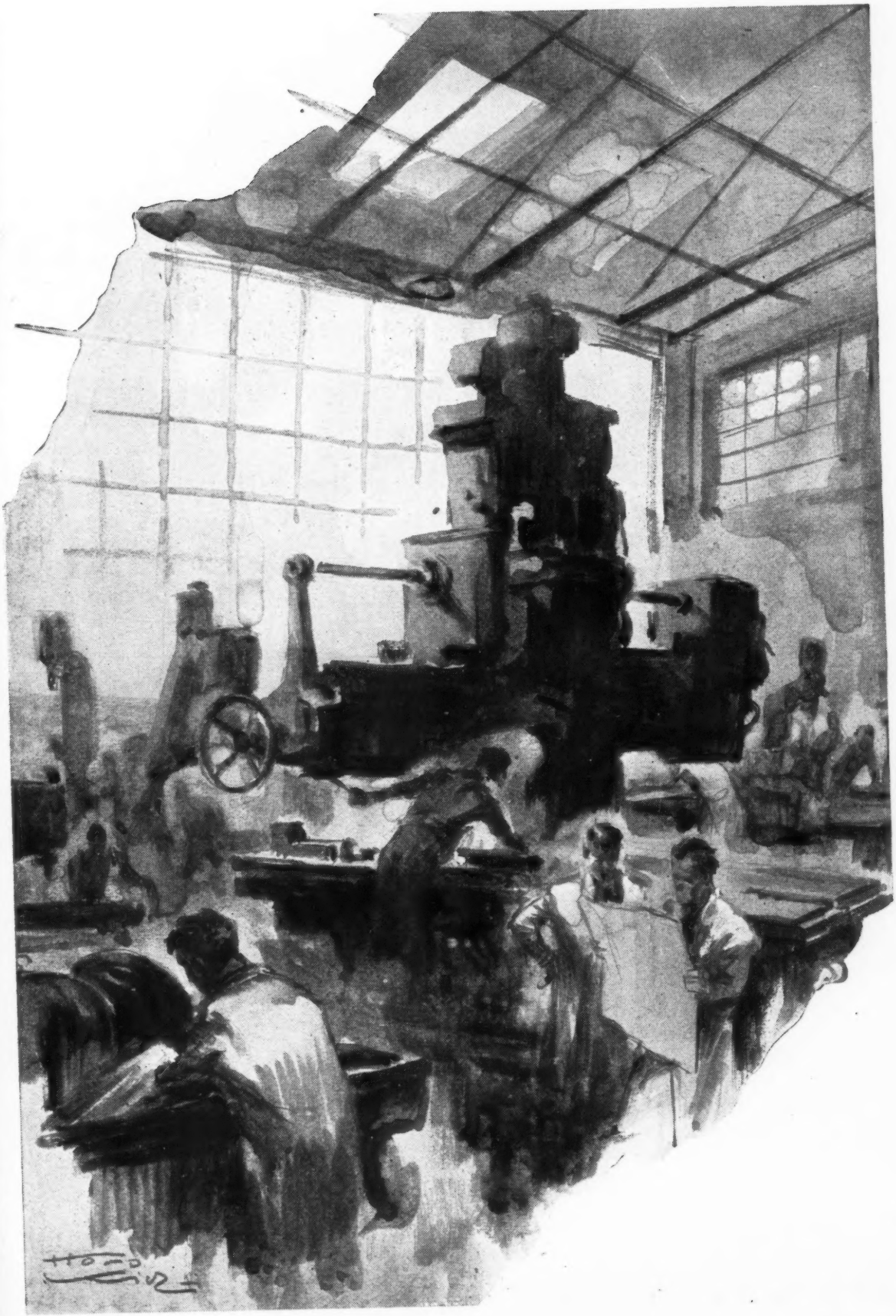
The artist Artur Horowicz recorded this impression of the tool-room at the Reliance Works, Chester for Williams & Williams Limited.

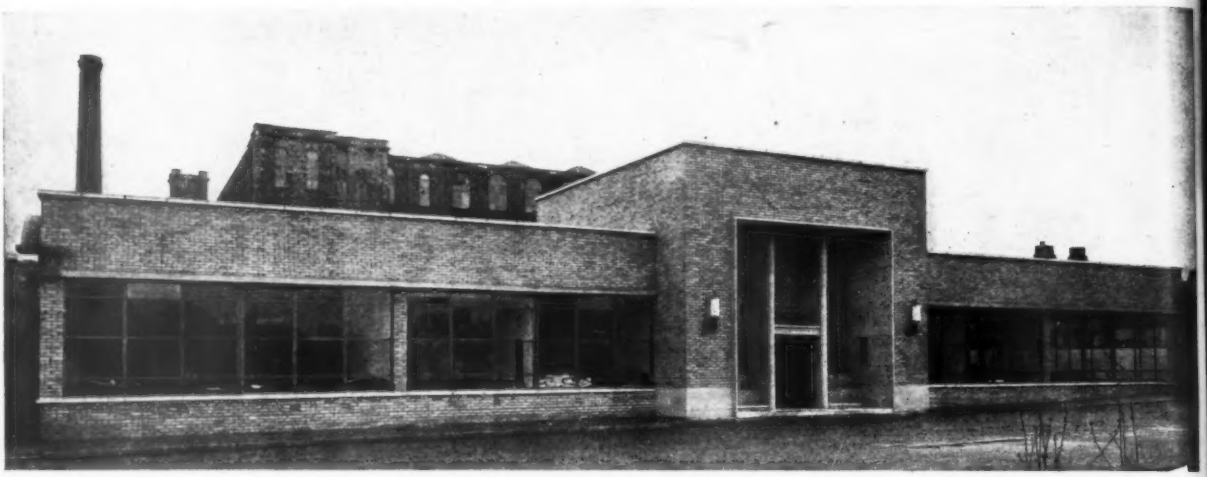
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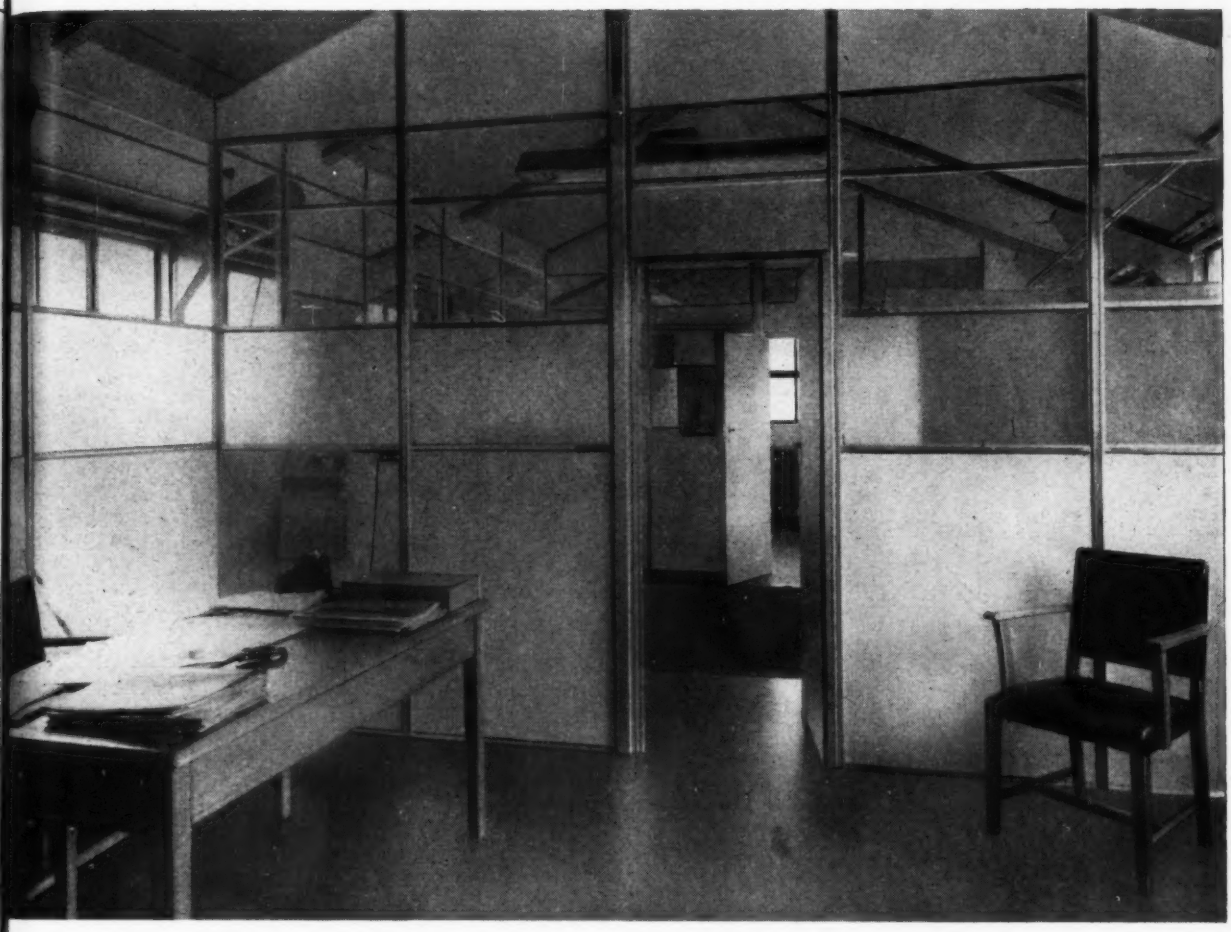
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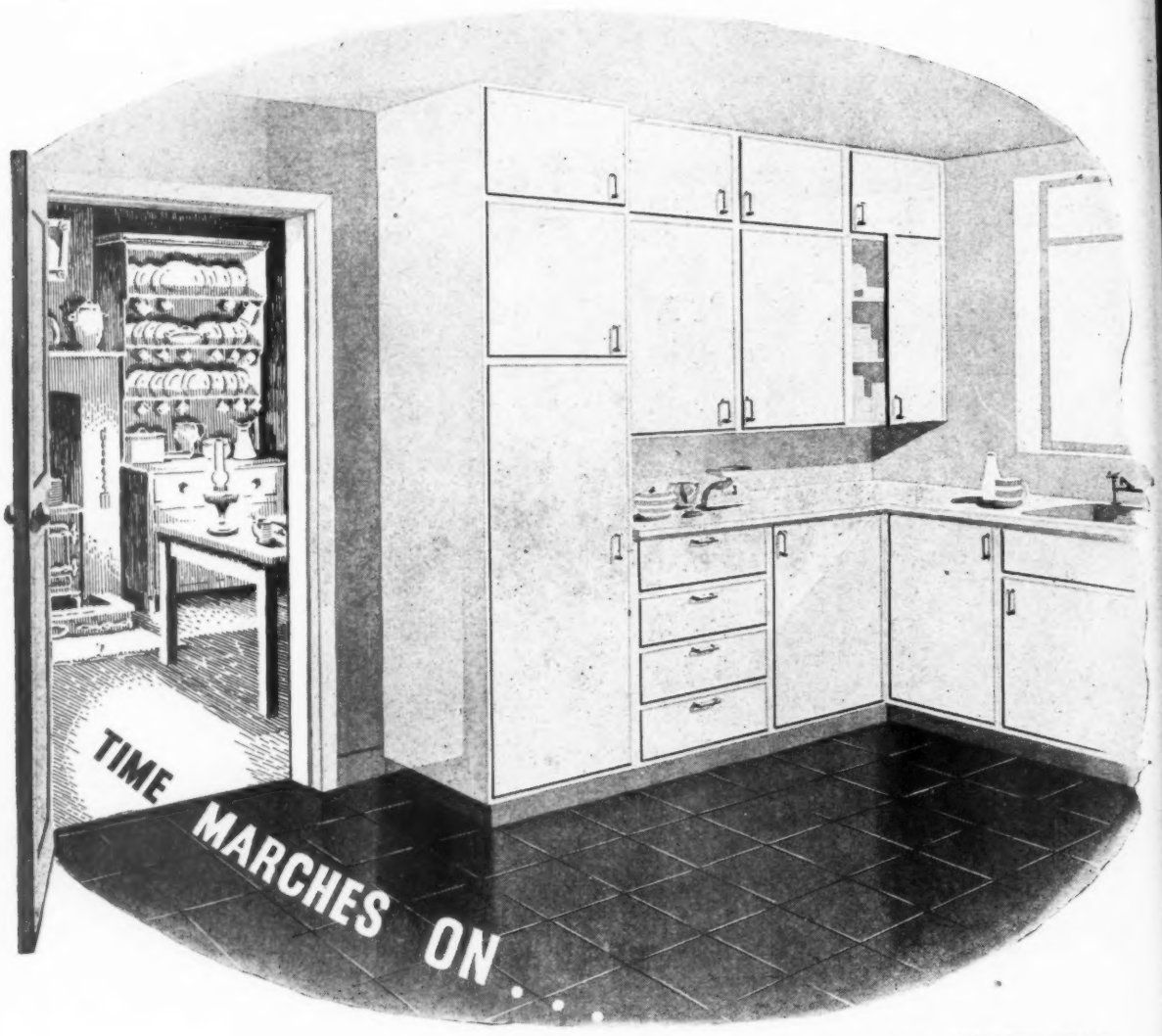
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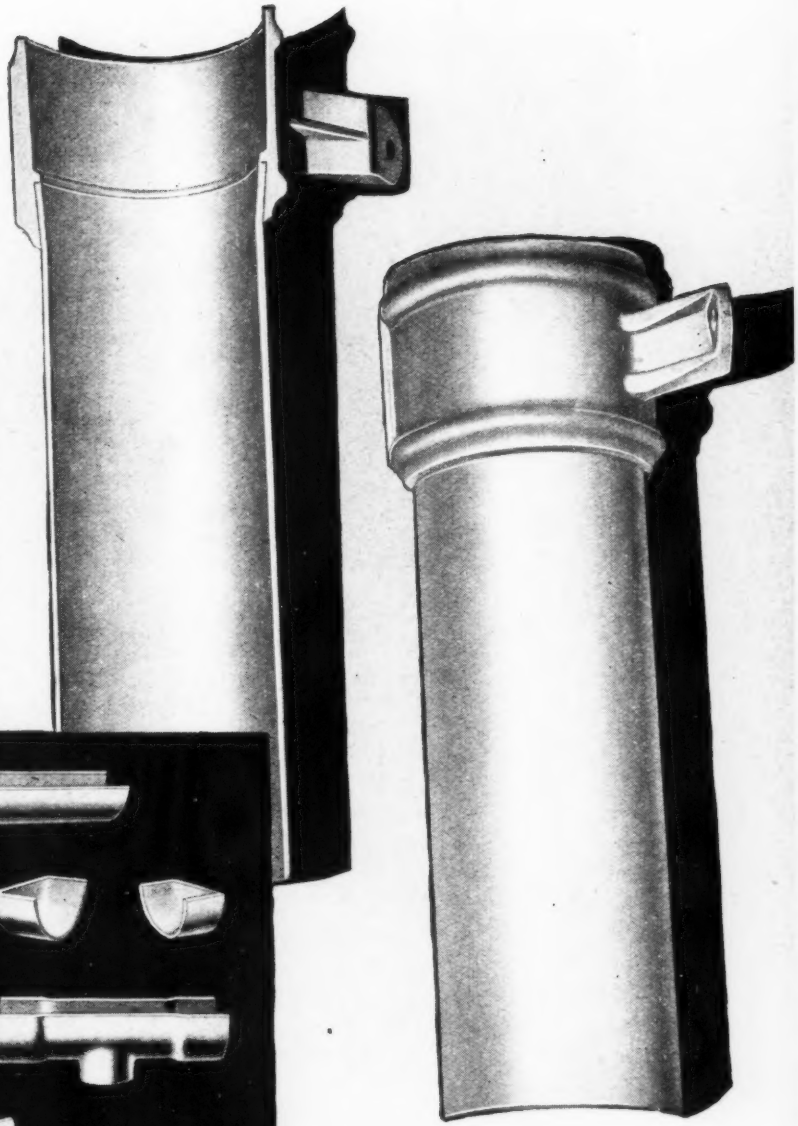
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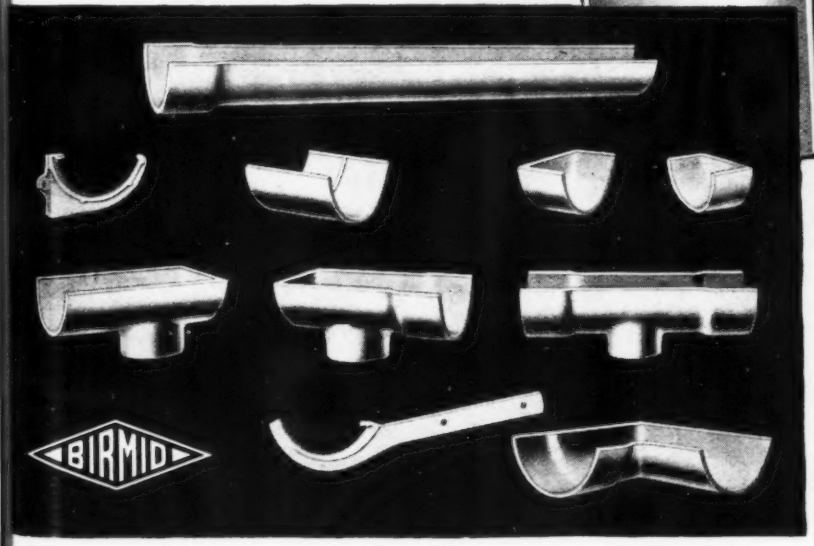
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THE ARCHITECTS' JOURNAL

No 2889 22 June 1950 VOL 111

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THE HOUSE THAT HARRISON BUILT

Last week I was privileged to be a guest of Harrison & Sons, Ltd., printers of the JOURNAL, at a dinner given at the Savoy Hotel to celebrate the bicentenary of their foundation. Their two hundred years' existence as a purely family business constitutes a record of which they are justifiably proud. From the earliest days of the firm, when Thomas and James Harrison had graduated from apprenticeship to partnership, the quality of the firm's work has secured them numerous government contracts. (It is probably fairly well known that their successful development of photogravure led the Post Office to adopt this process for the manufacture of postage stamps.) In 1825, during the time of the second generation to be involved in the business, the firm began its long association with the Foreign Office, and for nearly a hundred years maintained a private press on the premises of the Foreign Office itself.

*

When Thomas Richard Harrison, of the third generation, took over in 1839, offices were set up in St. Martin's Lane, where they have remained until today. At present B. Guy Harrison, of the sixth generation, whose photograph is published overleaf, is chairman of the company. And with him, on the board of directors, are four cousins of his generation, and two other members of the family belonging to the seventh generation. The perpetuation of the family tradition is, I am glad to say, already assured, for there is a sturdy eighth generation which ranges from infancy to public school age.

*

I add my own congratulations to those extended to the firm by the JOURNAL'S editors on another page. There are a number of large family firms which have achieved and still maintain a prominent and respected position in the trade, but the firm of Harrison is the doyen of them all.

PRODUCTIVITY TEAM MEETING

At the recent meeting at Kingsway Hall, the US Productivity Team, reinforced by the MOW and the second-in-command of ECA, played to a pretty full house of architects, builders, operatives and the rest. Being occupied at Bristol, I have had to rely on reports from friends, but as far as I can make out it was quite a good evening with a few speeches of the kind that are sometimes called "statesmanlike," but which my unkinder friends called dreary. Robert Matthew, on the other hand, showed up well for the architects (the President of the RIBA also being at Bristol).

*

On the whole, during the discussion any number of plasterers, clerks-of-works, foremen and operatives pleaded passionately and quite unselfconsciously for everything from immediate nationalization to better canteens. The meeting, which did not get anyone very much farther forward, at least provided some extra information beyond what is in the Report. I gather there are a number of further meetings to be held in various centres outside London: I shall go if I get the chance, and I advise you to do likewise.

DEBATE IN AYR

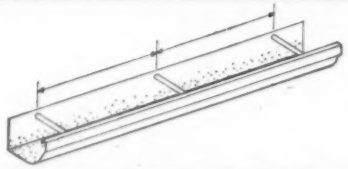
Almost every year since the war the Operatives' Organizations have passed resolutions at their summer conferences to the effect that the building industry should be nationalized without delay. But the resolutions have mostly been made in general terms, with the result that nothing ever seems to happen and similar proposals are made in the following year.

*

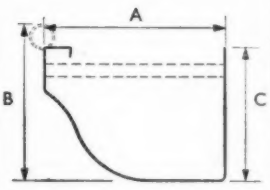
This week an NFBTO proposal is being debated at Ayr. The Federation is putting forward a scheme for a Ministry of Building, and the nationalization of all firms employing more than twenty men (about 9,000 firms and 700,000 workers), electrical contractors and a number of building material manufacturers. Among those specifically exempted are direct labour departments; the smaller firms, which employ less than twenty men (there are about 114,000 of these, employing something like 293,000 men); factory maintenance staffs; independent organizations; surveyors; engineers; and technicians solely employed by a

DATA SHEET FOR ARCHITECTS No. 6

OGEE ZINC EAVES GUTTERS



Tubular zinc stays are spaced at not more than 15″ apart. Ogee and rectangular gutters are supported at centres not more than 2′ 6″ apart by galvanized screws passing through the stays.



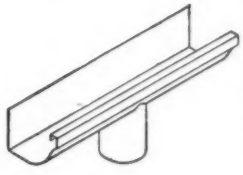
Gutters are made in standard lengths of 6′, 7′ and 8′ and in sizes as follows :—

A	3″	4″	4½″	5″
B	2⅜″	3⅛″	3⅞″	4⅛″
C	2⅜″	3″	3½″	3½″



Alternative beads





Outlets—the nozzle should fit at least 2″ into the top of the rainwater pipe. At least one outlet is needed for every 30′ length of gutter. Gutters should have a fall at least ½″ in 30′.

Ogee section zinc gutters, like other patterns, are light and easy to handle. When made of No. 12 Z.G. (23 I.S.W.G.) and properly fixed, they are strong and have a maintenance-free life of at least forty years; but for widths of 5″, a thickness of not less than No. 14 Z.G. (21 I.S.W.G.) should be used. Painting will prolong their life almost indefinitely. The dimensions of the Ogee Gutter, as of the half round gutters shown on Data Sheet No. 1, conform to British Standard 1431 : 1948. Standard fittings can be bought, or made up as required, when fewer joints will be needed. Further information on gutters, rainwater pipes and other uses of zinc in building can be had from the Association, together with a list of publications on request.

ZINC DEVELOPMENT ASSOCIATION

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building firm. Nevertheless, there seems to be an implication that these groups will be incorporated in the scheme later on.

*

Reports made so far have done little more than to point out that the signatories to the NFBTO scheme include Sir Luke Fawcett and Richard Coppock. It will be remembered that not so very long ago these gentlemen signed the Working Party Report, which criticizes the planning controls and bulk buying that are said to have hindered the industry. It seems hardly likely that a Ministry of Building would overcome these problems.

BRAINS V. BRAWN

I found the Mechanical Handling Exhibition at Olympia interesting and impressive. The man-power shortage has evidently set many brains to work, and it now seems possible to find machines which will do a lot of the jobs that have previously been a matter for brute force. Stacking trucks have had enough Press publicity for most of us to know what they look like and what they do, but there is plenty of other new equipment of interest:—Cranes which can back their jibs into the far corners of covered wagons, specialized conveyors and overhead hoists, as well as tilters and tippers and twiddlers for emptying rail wagons or any other specialized jobs.

*

The show closed at the end of last week and was worth a visit, if only for background information about the sort of equipment factory owners are likely to be using. The general level of display was, I think, remarkably high.

SECOND CONCESSION

Dr. Dalton's announcement that no development charge will be asked in future for certain kinds of extensions or conversion of buildings will raise the hopes of those who hope to abolish or at least greatly diminish this "tax on development."

*

There is no doubt at all that the liability to pay development charge is making landowners unwilling to part with their land and also frightening off developers. On the other hand, I don't



B Guy Harrison, Chairman of Harrison and Sons, Ltd. [the JOURNAL'S *printers], and Master of the Stationers' Company 1948/9. See Astragal's note.*

see that any reasonable man can deny that, in principle, the charge is right. Before the war, many owners of isolated land on the outskirts of growing towns had its value increased from £20 to £1,000 and more per acre by the fact that a bye-pass road was run through it (at a cost to the public of £20,000 and more per mile). It is clearly right that the public should be able to obtain a large share of the unearned extra value which public works confer on landowners.

*

The hitches began to appear when this process of reclaiming was taken to its logical conclusion by appropriating all "development rights" under the 1947 Act—in existing buildings as well as undeveloped land. With some exceptions, any change from a less profitable to a more profitable use was liable to a charge representing the full value of the difference (the 100 per cent. charge). All over the country, all the time, people want to make these changes—using a room in a house as an office, changing a house into flats, or an allotment into a rag-sorting depot, and so on. It is, therefore, hardly surprising that the charge is now regarded by thousands of people as an oppressive tax on enterprise, and that the Central Land Board's assessment of the proper charge seems occasionally to have been arrived at by thinking of a number.

*

Hope seems to lie in the direction of exempting as many small charges as possible. To depart from the 100 per cent. charge—in order to encourage landowners to make land available by giving them a share of the charge—would introduce a new set of complications; too complicated to be discussed here—at least this week.

THE MAN FROM BOGOTA

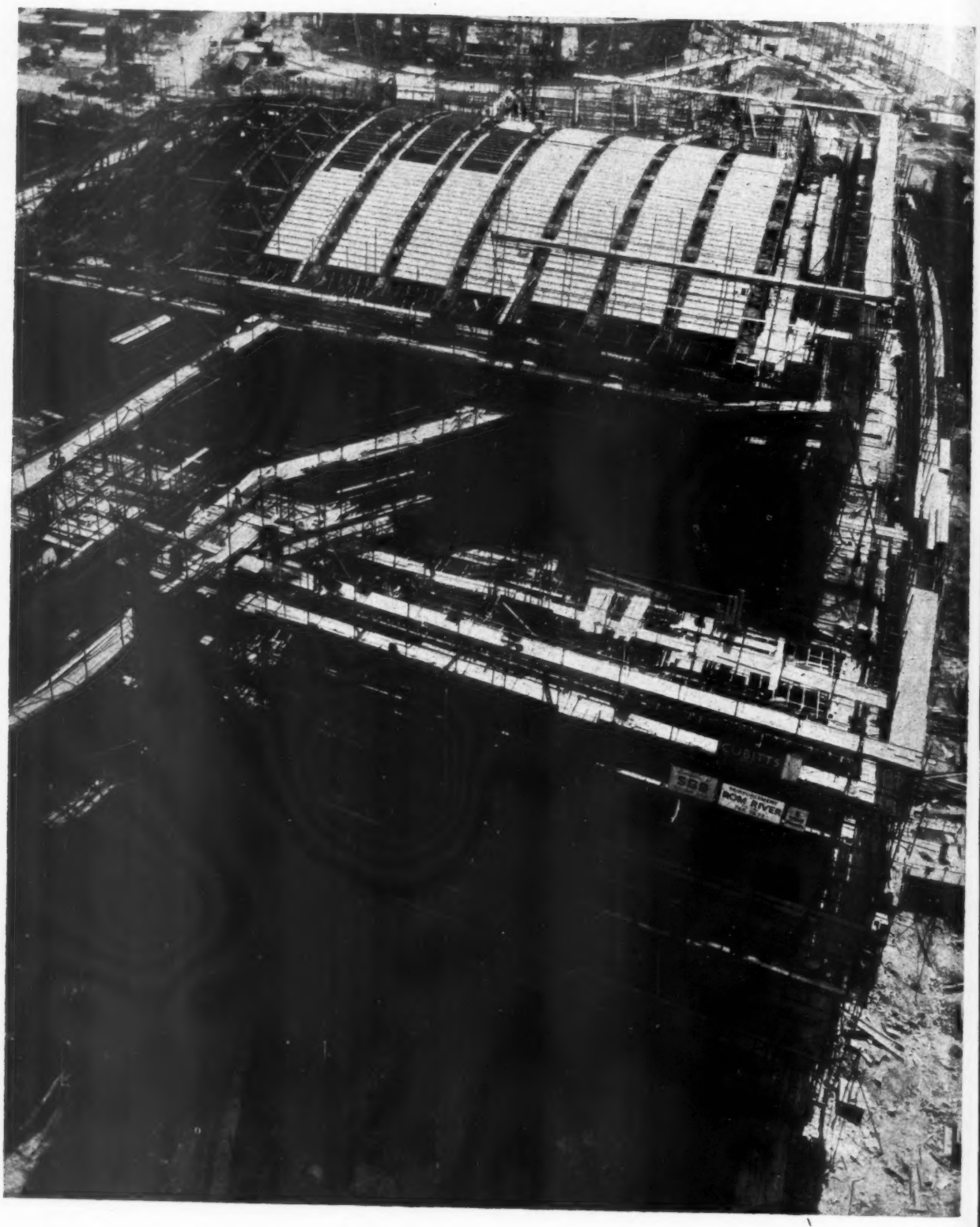
Lunching last week at the AA, I had a shock. For there, smiling at me, was the lean and handsome Latin face which was familiar in just that setting to Bedford Square students of twenty years ago. It was Camilo Cuellar and the years had hardly marked him.

*

He is back from his native Bogota on a three months' Grand Tour—a well-earned holiday, for during the two decades since he was awarded an AA Diploma he has helped to build up the largest partnership of engineers and architects in Columbia, in the firm of Cuellar, Serrano and Gomez. An architect works in quite a different way over there, he told me, because he acts as contractor as well, buying all materials, employing all labour and seeing the whole job through from start to finish. This, he says, makes work more interesting, besides eliminating the work of producing watertight detail drawings and specifications. By this method the architect knows the design and con-



"If all else fails, there's always Left-wing soccer." [See "The Man from Bogota."]



Royal Festival Hall

This week we publish [on pages 764 to 767] the fifth in the series of articles by John Eastwick Field and John Stillman on the LCC Concert Hall. The building, which has been named the Royal Festival Hall since the site was visited by the King and Queen on May 2, is shown above in a photograph taken recently from the Shot Tower. Rapid progress is being made and all roof trusses and most of the roof covering is now in place.

struction will be just the way he wants them, he can make snap decisions on the site, and he knows he won't be cheated. Things are made easier, too, by the bye-laws which are far less stringent than in England.

*

"Our difficulty is building materials," said Cuellar, "and although we have plenty of cement, brick and timber of our own and some factories for making components such as steel windows, we have to get a lot of stuff from abroad, mostly from the States—things like lifts and special equipment. And every bit of steel has to be imported, so we mostly use reinforced concrete, as they do in Brazil. My firm has developed its own system of concrete construction—Sistema Reticular Celulado. Concrete boxes, square on plan, are laid on temporary timber shuttering several inches apart. Reinforcement is placed between the boxes and the concrete is poured in. The floors rest on a form of mushroom column. For external cladding we use materials like hollow bricks, stone and sometimes marble."

*

I gather that Bogota is a good place in which to live. The climate is temperate, for the city lies half way up the mountains on a plateau. Thus Bogota doesn't go in for any Brazilian *brise soleil* effects and likes large window areas to let in the sun. The situation of the city is admirable for the Andes tower up from one side and slope away on the other. There is little ancient atmosphere, however, though the town is proud of its several early Colonial churches. Apparently much is expected of the town plan which Le Corbusier, Sert and Wiener are preparing with the City Council's architect.

*

"Before the first war the main cultural influence was French," said the Man from Bogota. "Now it is partly English (there is a big English colony in the city), but it is mainly American with its air-mindedness, cinemas, drug stores and Coca Cola."

*

Life in Bogota for the professional man seems pleasant enough and leads one to conclude that for an Englishman, until we can organize the international transfer of architects at suitable fees, football will remain the wisest choice of profession.

ASTRAGAL

The Editors

NATIONALIZATION OF BUILDING

THE National Federation of Building Trades Operatives is at present discussing proposals for the nationalization of the building and civil engineering industries. The proposals have been submitted to the annual conference of the union in Ayr by its executive in the form of a report, which has taken a year to prepare. Whatever the outcome of the discussion may be, the question of nationalization of building must evidently now be considered a pawn in the game of industrial politics. This fact will be unwelcome to many people. The proposals are unlikely to win much support among the framers of Labour and Conservative Party policies. Many industrial leaders will also regard the idea as ill-timed and even fantastic. Of all possible industries to nationalise, building seems to present the greatest intractability. Building and civil engineering demand the highest possible degree of decentralisation and it is amazing that the larger firms solve their administration problems so well. Of course, a case could be made out for concentrating more work in the hands of the more efficient (often the larger) units. But this would not be in accordance with the principles of nationalisation.

However, because there are innumerable arguments to be used against nationalization in this sphere the proposals must not be too lightly brushed aside, for they would never have been made if all was well with the building industry. This talk of nationalization, almost ludicrous as it may appear in terms of practical politics, reflects a growing malaise in the industry, a sense of frustration and lack of leadership.

But the fact that such a suggestion has been made shows that the operatives are lacking sympathy with the present centralised control. What is really wanted is not *more* centralization and control but *better* control and leadership.

The required leadership might be forthcoming if the economic framework of the industry was to be made more sound. And steps towards this might be taken by a Ministry of Building with full powers over housing and all other building matters. This part of the operatives' proposals—reform of the governmental machine—deserves most serious consideration. The three recent reports on building productivity unite in criticism of the present methods of governmental control, yet they all agree that some controls are necessary. Is it not time, then, that the government machinery was overhauled, in full consultation with the operatives and other interested parties?

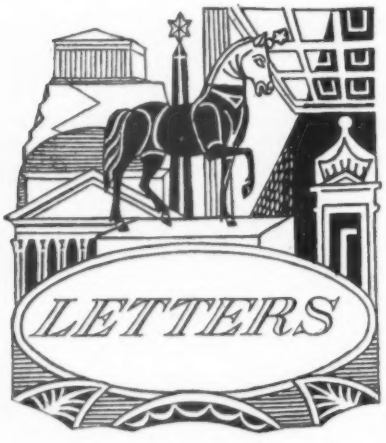
OUR PRINTERS

We congratulate our printers, Messrs. Harrison and Sons, on reaching their bicentenary, which they have recently been celebrating. Our own association with the firm began in 1944. But even in these few years—by no means easy years for the firm, which like other printing establishments has encountered many post-war problems—we have learned to

appreciate that their success is due to the confidence they inspire in their clients.

The fact that the House of Harrison has earned its reputation for reliability in its two hundred years of unbroken service is exemplified in the work of the first partners in the firm, Messrs. T. and J. W. Harrison. At a time when the presses in St. Martin's Lane were printing the *London Gazette*, an assignment that made the firm known throughout the world, a compositors' strike threatened a temporary suspension of publication. But the two Harrisons, who had served their apprenticeships before becoming partners, spent all one night setting up type in order to get the paper out on time.

Similar problems could not, of course, be solved in the same way today. But the same spirit is prevalent in the firm, as the Government departments they served during the war would testify. Owing to the heavy demands of these departments, the company's London headquarters was not removed to the country. Like a less distinguished establishment in the vicinity they can claim: "We Never Closed." And we hope that in spite of the crippling effect that taxation is having on family businesses in these days, they never will. We wish them success and prosperity in their next two hundred years of exacting work.



A Reader

G. Doyle, W. A. Eden, W. H. King, A. B. Lacy, T. H. Lodge, P. W. Marshall, A. V. Montague, J. R. Tolson

New Towns

SIR,—Mr. Jensen is surely right in his second supposition about attitudes to New Towns [AJ, June 8], for the public are showing a happy but mistaken apathy to them and their related problems, while the experts are showing an optimistic but irrational attitude (like that of the Ministry of Town and Country Planning's Circular), or a more realistic but controversial attitude (like Mr. Jensen and correspondents in *The Listener*). I should not say there had been any conspiracy of silence on these matters, but if there had been Mr. Jensen has most ably broken it, and I welcome his letter.

I am in general agreement with his statement that the New Towns are not likely to afford much relief to the metropolitan housing situation. I should go further and say they were unlikely to afford any relief at all. This is for the following reasons.

First, the whole arithmetic of the New Towns was worked out on the simple assumption that the population in the Greater London Region (which is a good deal larger than what is generally known as Greater London) would be stationary in numbers but could otherwise be moved at will to fit a new pattern. Even with these assumptions, Sir Patrick Abercrombie had a surplus of 100,000 people which he suggested would be attracted outside the Region altogether. In fact, there is a continuous migratory movement into Greater London and at the same time a continuous natural increase of the residential population. Even if there were no immigration, there would still be another 5 per cent. increase in the total population in twenty years' time. The arithmetical balance sheet of the New Towns programme has altered little, and there would, therefore, be a theoretical overspill from the whole Region in twenty years' time of about 600,000. This is roughly the figure it is hoped to decentralise now so we should, in effect, end up no better off than we are today. On arithmetical grounds, therefore, it would seem wise to prepare for higher densities. However, this is not the whole story.

The second point that must be made is that the housing problem cannot be solved by arithmetic nor by Ministry Circulars and not even by Development Plans, but only by producing more and better dwellings. The building resources of the country are limited and it is probable that in the Greater London Region no more than an additional 50,000 dwellings can be provided each year. Something can now be said about housing needs. The average household size in Greater London is now down to 3·1 persons. This is the average size, not of the number of persons per house, but of the unit requiring a separate dwelling. This means that for Central London alone, where there are only 800,000 dwellings for nearly 3½ million people, an additional 300,000 dwellings are required. The additional housing need for Greater London is between 0·8 and 1·0 million. The 50,000 new dwellings a year included the programmes of the New Towns which will be increasing as the LCC and inner authorities Green Belt schemes are completed. It means that it will take between 16 and 20 years to wipe off the purely arithmetical arrears of dwellings. Above this there will be the new dwellings required to rehouse those still living in slums long overdue for clearance and those who will have to be moved to accommodate new schools required under the Education Act and for open spaces so urgently needed in the most deficient areas of Central London. The population growth referred to will need an additional 160,000 or so dwellings by the end of twenty years. At the end of twenty years, therefore, there will be a fresh and incalculable but certainly immense need for additional dwellings.

The greatest problem is, therefore, not so much one of density as of speed of construction. It seems fair to ask Mr. Jensen, who really knows the Metropolitan problem, whether he thinks an increase in the allowable residential density would enable Greater London's housing needs to be met at a much faster rate. It must be remembered that the housing shortage is a national and not a purely local problem, and that the success of one housing authority in speeding up construction is very often achieved at the expense of another.

It has been rumoured that the construction of the LCC's estates in Hertfordshire has held up work in the New Towns in that county by causing a dearth of bricklayers.

A READER.

Surrey.

Memorial Fund

SIR,—May we crave the hospitality of your columns to inform his many friends in the profession that a fund has been opened to provide a suitable memorial at the Leeds School of Architecture to the late F. W. H. Allison, who was intimately associated with the School as student, lecturer and deputy head, for more than a quarter of a century before his death in November, 1948.

As members of the Memorial Committee we believe that a large number of past and present students of the School, professional colleagues, and others, to whom Allison acted as friend and counsellor during those years, will welcome an opportunity to contribute, so that a sum sufficient to endow an annual prize or scholarship will be forthcoming.

May we ask that any of your readers who may wish to show their appreciation of Allison's work should send their contributions to the treasurer, The Allison Memorial Fund. The Leeds School of Architecture, 43a, Woodhouse Lane, Leeds, 2. Cheques should be made payable to the Allison Memorial Fund.

G. DOYLE, W. A. EDEN, W. H. KING, A. B. LACY, T. H. LODGE, P. W. MARSHALL, A. V. MONTAGUE, J. R. TOLSON.

Leeds.

The EDITORS reserve the right to shorten letters from readers. Whenever possible, however, they are published in full.



AA

Visit by Aalto and Lloyd Wright

Alvar Aalto, who arrived in England on Monday and will probably teach at the AA during his month's visit, will be speaking at the association's headquarters, 36, Bedford Square, W.C.1, on Wednesday, June 28, at 8 p.m.

Frank Lloyd Wright, who is expected to arrive in this country on July 6, will be presenting awards at the AA's annual prizegiving on July 14.

MOTCP

Development charge exemptions

Last week, Mr. Dalton showed the House of Commons that he was determined to add to his reputation as a liberating Minister. New regulations would shortly be laid before Parliament, he said, exempting certain classes of property from development charges. Cases now exempted from liability to development charge were:—

Enlargement of dwelling houses by 10 per cent., or 7,500 cubic feet, whichever was the greater.

The same would apply to the rebuilding of dwelling houses with a simultaneous enlargement within the limits indicated.

Lateral conversion into flats of not more than three adjoining dwelling houses, provided they were in existence before July 1, 1948. (The Georgian Group had been pressing for this relaxation to be made.)

War-destroyed houses in respect of which there was entitlement to a cost of works payment.

It would still be necessary to get planning permission to carry through these latent alterations, but, given permission, no charge would lie.

It was proposed also to exempt from development charge the use for business purposes of part of a dwelling house. This, said Mr. Dalton, was intended to help the small man.

Hostel to be built in Mecklenburgh Square

Hugh Dalton has given permission to the Dominion Students Hall Trust to build a new residential hostel for students on the north side of Mecklenburgh Square.

This decision follows the inquiry held at St. Pancras Town Hall on May 22 and 23. In support of his decision, the Minister says that the proposed building will help to meet an urgent need for an increase in the proportion of students who can live a corporate academic life in residential college or hostels. At present too many are forced to live "an academic half-life in scattered and often most unsatisfactory lodgings."

The suggestion was made at the inquiry that satisfactory accommodation could have been provided by restoring the existing north terrace and adapting it for the purpose of a hostel. The Minister does not think that it would be worth rebuilding the original terrace on the old pattern. He believes it is not beyond the skill of British architects to design a new building that will harmonize in scale and proportion with Joseph Kay's fine terrace on the eastern side of the Square, which is to be preserved. To ensure this, he has decided that the Royal Fine Art Commission shall be consulted on the style of building to be proposed. The design, when ready, will be submitted to him for approval.

The Minister has also decided to permit the use, for the accommodation of students, of a number of Georgian houses in the eastern terrace. He has refused permission for five other houses to be used as offices in this terrace. In his opinion, the whole terrace should be restored and kept for purely residential purposes.

NORTH WALES

Architect awarded MOH bronze medal

During a visit of inspection to the housing estate at Cae'r Felin, Llanrwst, North Wales, which had won for the council the distinction of being judged the best post-war housing scheme completed in Wales before the end of 1949, Aneurin Bevan, Minister of Health, paid a tribute to the local council and to the architect responsible for the scheme, S. Colwyn Foulkes, of Colwyn Bay, who had received the Minister of Health's bronze medal.

COMPETITION

Society's Summer Sketch Club

All students resident in Buckinghamshire, or working in the office of a member of the BSA who practises in the County, are invited to submit work for the Summer Sketch Club.

Prizes of books will be awarded in two classes:—(1) A series of three sketches of architectural subjects, carried out in any medium; and (2) a set of measured drawings of any suitable building in the County, preferably an eighteenth century domestic building. Competitors are to notify W. Leslie Jones, honorary secretary of the Bucks Society of Architects, 21, High Street, Great Missenden, Bucks, not later than July 31, of their intention to compete, when instructions for delivering the work will be sent to them. Work will be required not later than Monday, September 19.

Brazilian Architecture Essay Prize

The Anglo-Brazilian Society offer a prize of £50 for an essay on architecture on Brazil. The competition will be confined to members of the RIBA and of the allied societies overseas, and elected students of the RIBA and of the allied societies overseas, who have passed the RIBA Final or equivalent examination, or who have produced certificates from responsible architects to the effect that they have reached the required standard. Competitors must have reached the age of 21 years on July 1 of the year in which the competition is held.

The Essay (in English) must not exceed 3,000 words. It will be judged by a jury appointed by the Anglo-Brazilian Society and the RIBA. The jury will include the following—*Anglo-Brazilian Society*: Sir Malcolm Sargent, A.R.C.O., Senhor Jorge de Oliveira Maia, and Lady Evans. *RIBA*: R. du R. Aberdeen, Anthony M. Chitty, and E. Maxwell Fry.

The subject set is "Brazilian Architecture" and the essay may review architecture of the colonial and subsequent rococo periods, relating this to the development of æsthetic trends and modern construction in the architecture of modern Brazil. Competitors are expected to make a contribution to architectural thought or scholarship. The jury will also look for a high standard in the form, style and presentation of the essay. The closing date of the competition will be December 31. Further details may be obtained from the Administrative Secretary of the Anglo-Brazilian Society, 31, Palace Street, Westminster, London, S.W.1.

DIARY

Building Industry Productivity Team Meeting. Speakers, R. O. Lloyd, M. H. Thackray, Glynn Lloyd, W. R. Cowen. Lecture Theatre, National Museum of Wales, Cardiff. 7 p.m. JUNE 22

Annual General Meeting of the Institute of Quantity Surveyors. Kent Room, Caxton Hall, Caxton Street, Westminster, S.W.1. 2.30 p.m. JUNE 24

Twelve-day Planning Study Tour. Inspection of plans for reconstructions and tours of Birmingham, Coventry, Manchester, Peak District, National Park, etc. (Particulars from TCPA, 28, King Street, W.C.2.) JUNE 26-JULY 7

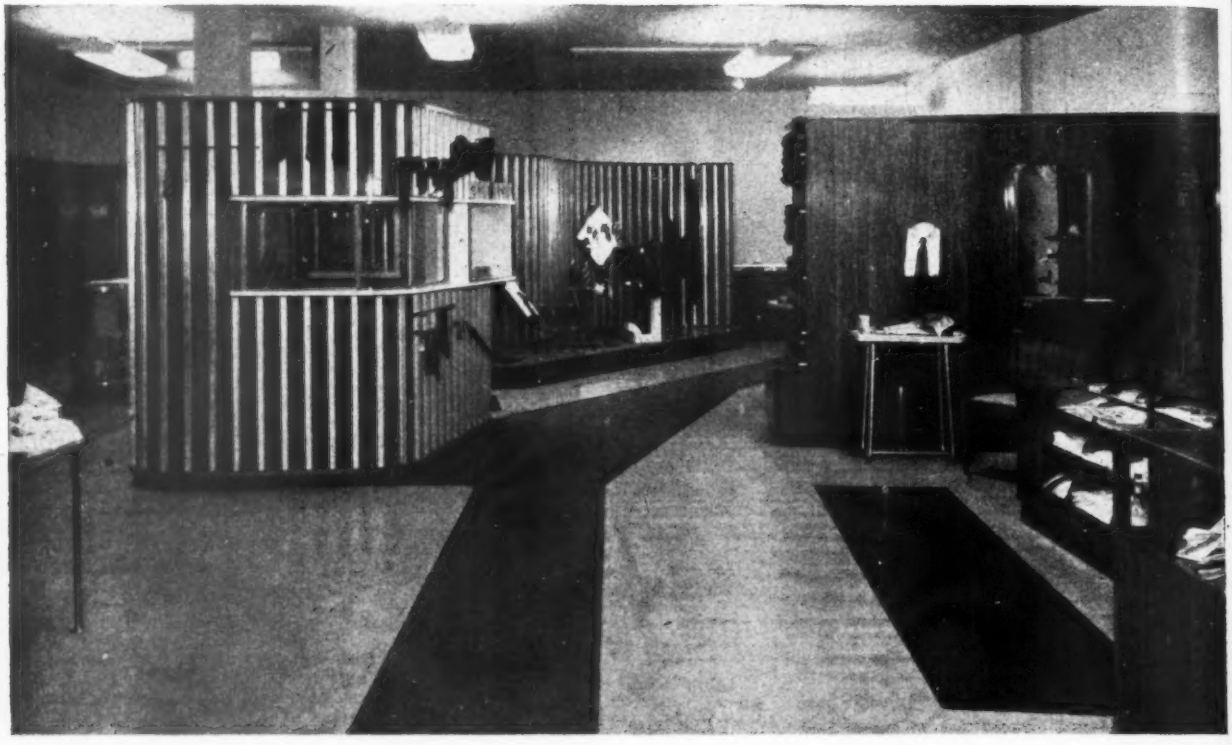
Building Industry Productivity Team Meeting. R. O. Lloyd, M. T. Waterhouse, W. R. Cowen, J. H. McKechnie, R. S. Gray, C. G. Rowlands. At Institute of Engineers and Shipbuilding Hall, 39, Elmbank Crescent, Glasgow. 7.30 p.m. JUNE 26

Building Industry Productivity Meeting. R. O. Lloyd, M. T. Waterhouse, W. R. Cowen, J. H. McKechnie, R. S. Gray, C. G. Rowlands. Pollock Memorial Hall, 18, Bristo Street, Edinburgh. 7.30 p.m. JUNE 27

Building Industry Productivity Meeting. C. D. Calverly, R. H. Matthew, F. W. Beazley. At Memorial Hall, Sheffield. 7 p.m. JUNE 27

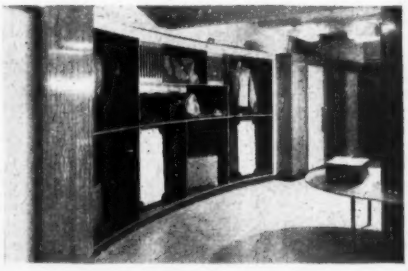
Address by Alvar Aalto. At AA, 36, Bedford Square, W.1. 8 p.m. [Members and one guest invited.] JUNE 28

OUTFITTERS SHOP IN LORD STREET, LIV



The interior of Moss Brothers' branch at 19, Lord Street, Liverpool, has been designed by E. C. Kent; assistant architect, I. Kent. The shop occupies two floors. Finishes: floors, grey 6·7 mm. thick linoleum, rust-red strip carpet; fittings, wax polished walnut veneer, plinths of mahogany; showcase interiors, painted; walls and ceilings, distempered; lettering, coloured plastic, play-bill type; curved display screen, mattanodised aluminium H sections fixed vertically at 5-in. centres, webs pierced to take display pegs. Above, the ground floor from the main entrance; below, left, the men's riding clothes department; below right, the trunks department; bottom right, the hats and overcoats department; below, facing page, the suits department. The work cost £12,000. The general contractor was D. J. Connolly and the shopfitters were Courtney, Pope Ltd. A list of sub-contractors appears on page 776.

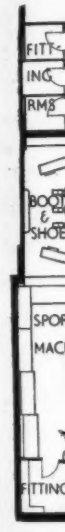








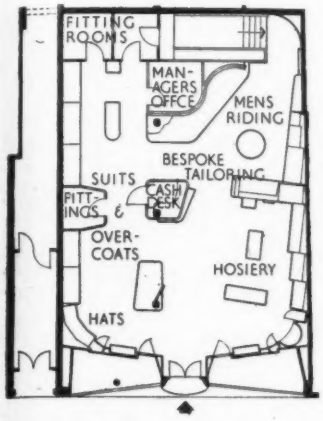
Ground



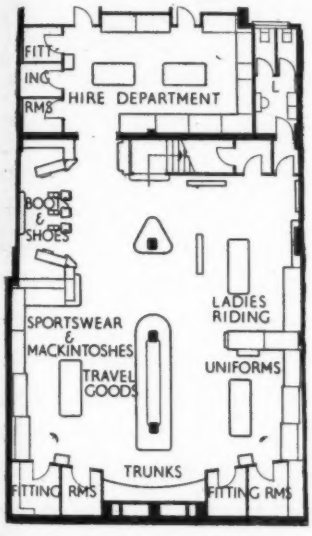
Baseme



LIVERPOOL



Ground floor plan



Basement floor plan [Scale: $\frac{1}{8}$" = 1'0"]





This feature covers aspects of legislation, parliamentary news or statutory rules and regulations which are of special significance to the architectural profession.

ERNEST WATKINS

The Architect and Current Affairs

The Town and Country Planning General Development Order and Development Charge Application Regulations (1950 N. 728) was made on May 8, 1950, and came into operation on May 22, 1950. It replaces the General Development Order of 1948, and so becomes the standard guide to all applications for development permission and for the assessment of development charge. Let me preface this note, therefore, by saying that no summary can fully replace the copy of the Order, which may be obtained for 9d. from the Stationery Office.

Nevertheless, the general plan of the Order can be summarized. It has two major purposes. It revises the items of development which may be undertaken without specific reference to the planning authority. It also lays down a new procedure by which a landowner proposing a development may apply for general approval of the idea first, leaving over the settlement of the details. Those are both important points. So far as arrangement goes, the first part of the Order deals with planning permission. It is followed by a schedule which lists the detailed exemptions from the need for specific permission. The second part deals with applications for the assessment of the development charge.

To pass on to the details of the Order itself: clauses 1 and 2 are largely formal, clause 1 applying the Order to the whole of England and Wales and clause 2 being the interpretation clause. Clause 3 is headed "Permitted Development." Its operative words run: ". . . development of any class specified in the First Schedule to this Order is permitted . . . and may be undertaken . . . without the permission of the local planning authority or the Minister." That makes it clear that, if you can bring your proposed works within the scope of the first schedule, you can go ahead without thought of planning permission (but not, of course, without thought of bye-law permission, Ministry of Works permission and any other equivalent hurdle). Clause 4 takes a little of this back. It provides that the Minister may lay down that in certain areas planning permission may still be required as before. This, it is said, is to cover the position of National Parks.

Clause 5 is the clause that allows the skeleton plan to be put up for approval in principle. The application is to be made on a form provided by the local authority. It must have a plan sufficient to identify the land and "such other plans and drawings as are necessary to describe the development." Not more than three copies of the drawings may be required, and the application may leave open such things as siting, design, external appearance and means of access.

Clause 6 empowers the Minister to restrict a planning authority's power to grant permissions; clause 7 requires the Minister of Transport to be brought in over any application affecting trunk roads; clause 8 empowers a planning authority to depart from its development plan; clause 9 lists the authorities a planning authority must consult; clause 10 deals with the reference of applications to the Minister; clause 11 with appeals; clause 12 requires a planning authority to keep a register of applications; and clauses 13 and 14 are largely formal. So we come to the first schedule.

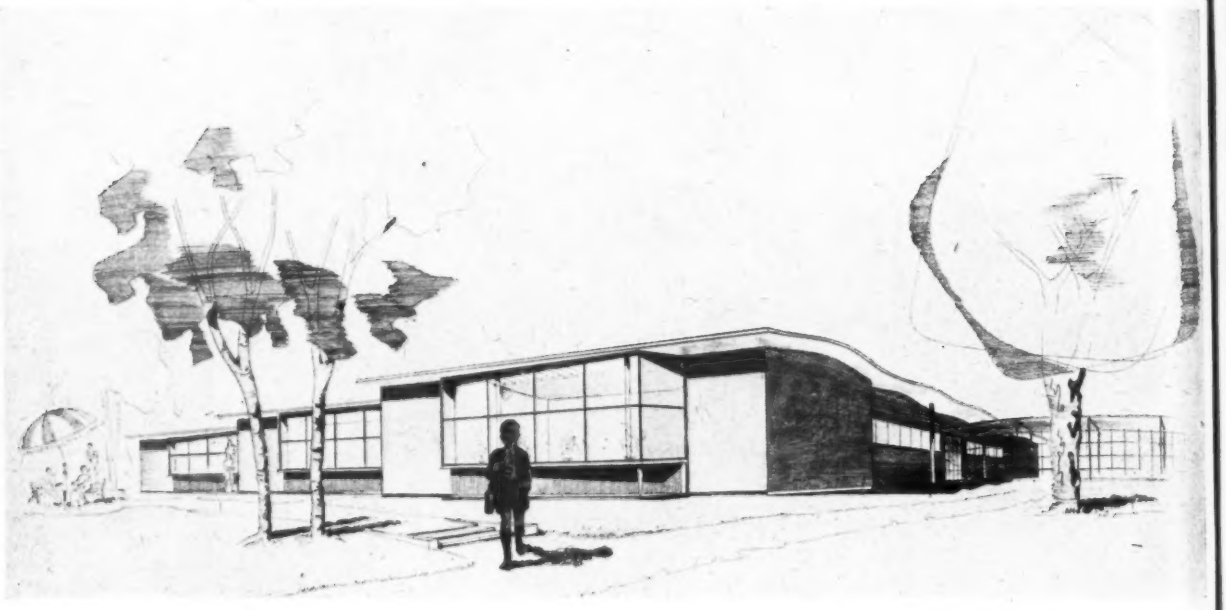
The schedule is arranged in two columns, the first listing various kinds of development by classes, the second stating on what conditions those classes of development may be carried out. In addition, there are two standard conditions laid down which apply to nearly all the classes. The standard conditions are: that the permission does not allow of the "formation, laying out or material widening of a means of access to a trunk or classified road," and (No. 2) that no development shall obstruct the view of a person using a road near any corner, bend, etc., so as to be likely to cause danger.

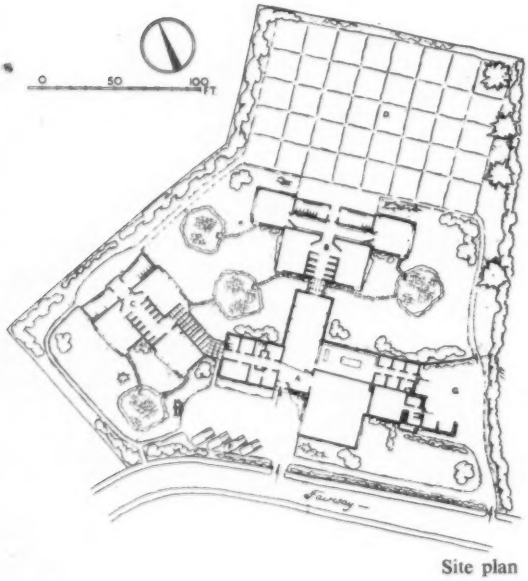
The classes listed in the schedule in which most will be interested are those governing development within the curtilage of a dwelling-house (class I) and development for industrial purposes (class VIII). A dwelling-house may be increased by 1,750 cu. ft. or by one-tenth, whichever is the greater, subject to a maximum of 4,000 cu. ft. and limits of height and building line. In addition, sundry buildings may be built within the curtilage with a limit of height (12 ft. for ridged buildings, 10 ft. for others). Permitted development under class VIII includes the provision of private ways, apparatus and machinery, and permission to extend or alter the building itself, provided that the original height is not increased and that the cubic content of the original building is not exceeded by more than one-tenth or the aggregate floor space by more than 5,000 sq. ft. Class VI deals with agricultural land, and on land with an area of more than one acre agricultural buildings may be fairly freely erected, provided they are kept at least 80 ft. from the metalled portion of a trunk or classified road. In each of these three cases standard conditions 1 and 2 apply. Other classes set out in the schedule cover, in the main, works by public authorities, but it should be noted that class III covers changes in use only and extends slightly the number of changes of use that do not need prior permission.

Part II of the Order—that which deals with development charge applications—is quite straightforward and needs no special comment.



APEX CORNER PRIMARY SCHOOL





Site plan

The school illustrated here was designed by C. G. Stillman, Middlesex County Architect, to conform with the MOE's recommendations for economy in expenditure and in time taken to prepare plans for the 1951 programme. So that the cost per place of £140 would not be exceeded, allowing for a building rate in the London area of 56s. per sq. ft. including playgrounds, the 55 sq. ft. per place suggestea in the Ministry's Circular 209 has been reduced to 50 sq. ft. The new school at Hendon, which will soon be commenced, is the first to be planned in three units; a 4-classroom block for 160 junior pupils, seen above from the south and in section opposite; a 3-classroom block for 120 infants and a block comprising assembly hall, kitchen, dining room, staff rooms, medical inspection and boiler house, shown in plan below. These units are connected by short covered ways

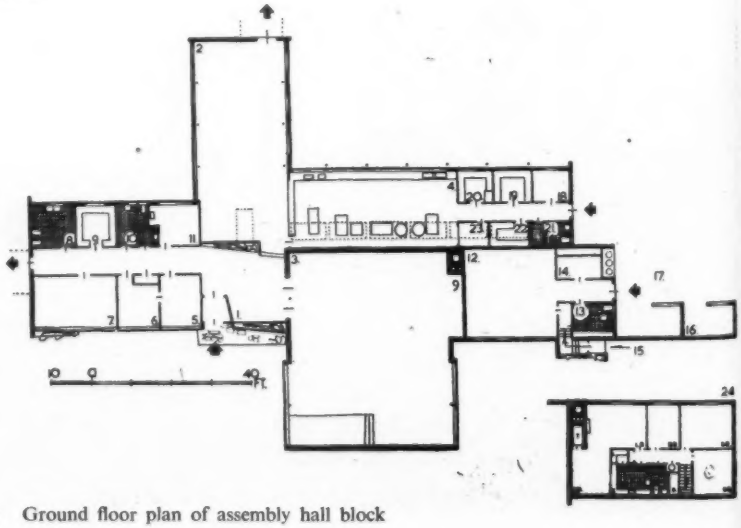
KEY

SITE PLAN

A Assembly hall block
B 4-classroom block
C 3-classroom block
D Pitch
E Open air teaching
F Car park
G Yard and coal store

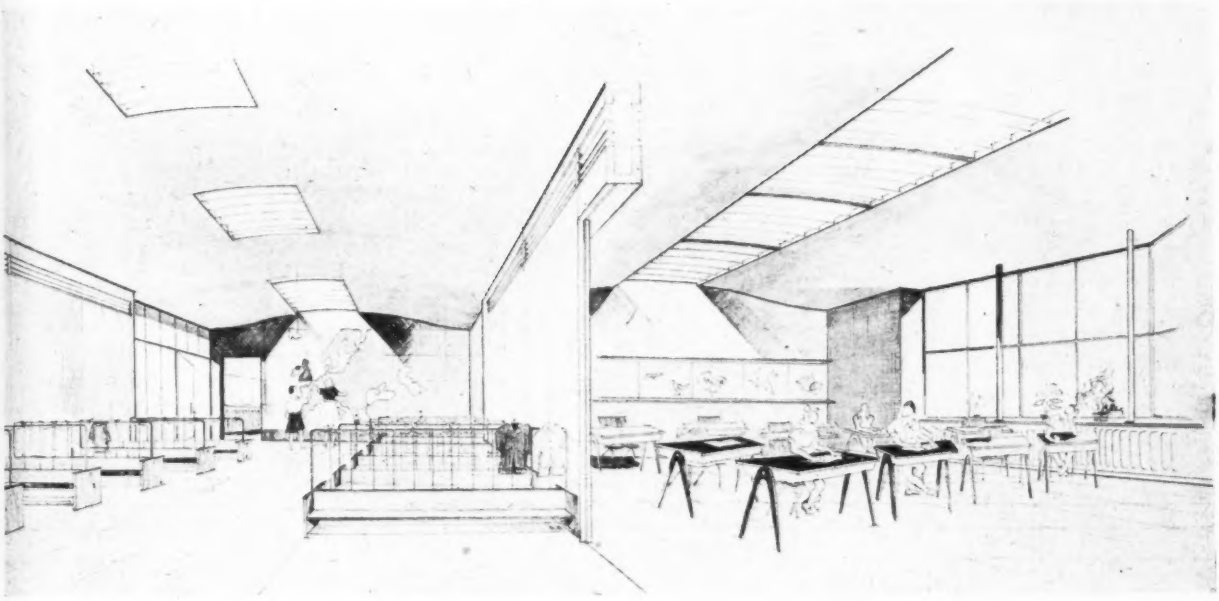
ASSEMBLY HALL BLOCK

1 Entrance
2. Dining room
3. Assembly hall
4. Kitchen
5. Head teacher
6. Asst. head teacher
7. Staff room
8. Female staff lavatory
9. Store
10. Male staff lavatory
11. Medical inspection
12. Boiler room
13. Workshop
14. Switchroom
15. Entrance to flat over
16. Fuel
17. Yard
18. Staff
19. Veg. store
20. Larder
21. Lavatory
22. Dry store
23. Office
24. Schoolkeeper's flat [first floor]

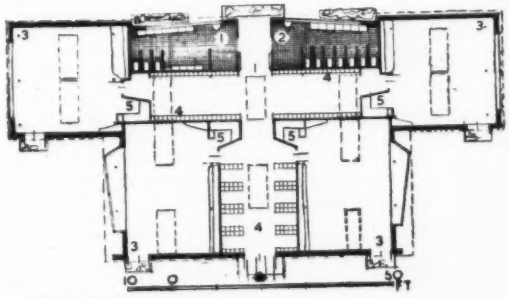


Ground floor plan of assembly hall block

AT HENDON, MIDDLESEX

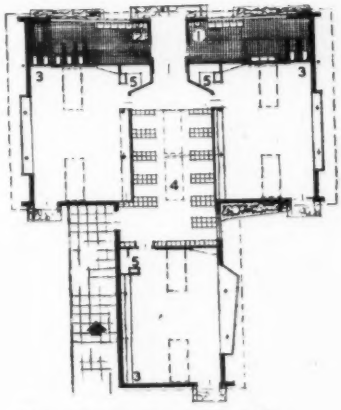


or by means of the dining room, seen below from the entrance hall. Daylighting in the classrooms is from bay windows and curved perspex roof lights, with adjustable louvres to prevent glare, which allow an even distribution of light and a reduction in the standard height of classrooms. A typical classroom and open cloakroom, with the dividing wall cut away, is shown above Foundations are reduced to a minimum by the use of independent tubular steel columns supporting continuous light steel framed trusses, spaced at 10-ft. centres over bays of 21 ft. All structural work, except the end wall of the assembly hall and the boiler house will be in light patent partitions, easily adapted and altered to meet future changes. Working drawings for 20 primary schools to be erected in 1950 have been prepared. The senior architects on this work are C. E. Hartland and L. T. Channing.

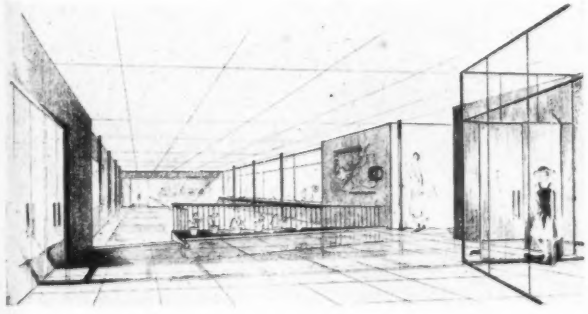


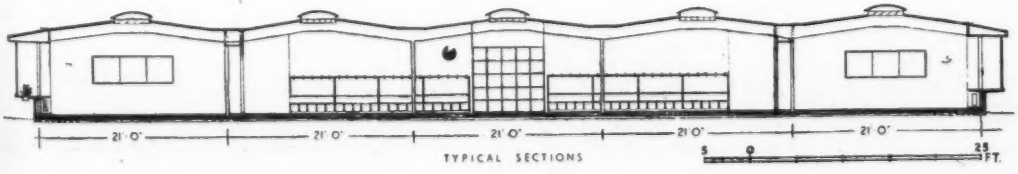
Plan of four-classroom block

KEY
1. Boys' lavatory
2. Girls' lavatory
3. Classroom
4. Cloaks
5. Store

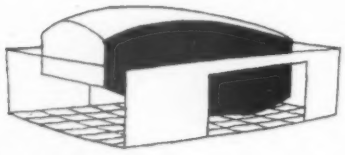


Plan of three-classroom block





TYPICAL SECTIONS



DIARY

During April.—Internal access staircases from main foyer to higher levels constructed.

April 1.—*Commencement of wing slabs at* 64.00.

April 11.—*Commencement of granolithic flooring to stairblocks* 1-4.

April 15.—*Wing slab at* 78.00 *commenced.*

April 25.—*Fixing of suspended fibrous plaster ceiling in sunken foyer at* 24.00 *commenced.*

April 26.—*A special instruction was issued by the Architect referring to a Council resolution of April* 4, *which had since been confirmed, that the Concert Hall, as previously known, should in future be referred to as the Royal Festival Hall.*

April 27.—1*st roof truss* (½ *section*) *arrived on site.*

April 28.—*Roof truss assembled on working platform.*

May 3.—*Extraction of sheet piling along river frontage commenced.*

May 4.—1*st pair of roof trusses moved into position and fixed.*

May 10.—*Bored piling commenced along SW elevation for special foundations to terrace and heat pump mains.*

May 16.—1*st delivery of metal window frames.*

May 17.—*Air pressure sprinkler tank* 30 *ft.* × 7 *ft. dia.* × 8 *tons delivered and lowered through plant access entry into boiler house.*

May 21.—*Fixing of precast concrete decking to roof inner shell commenced.*

May 22.—*Domestic hot water boilers delivered to site.*

May 25.—*Erection of economisers to gas fired boilers commenced.*

June 3.—*Crane and gabbard being dismantled.*

June 5.—*Asphalte to salt tank and air pressure tank commenced.*

June 7.—*Fixing of balustrades to main foyer commenced.*

General.—Inner end wall to auditorium being constructed to crown of roof, projection room slab cast, construction of ventilation plant room continuing. Supporting sides to auditorium boxes complete, steel fixing and top shuttering to balcony structural sloping slab continuing. Columns and beams to support precast stepping units in the auditorium being constructed. Belvedere Road end stairblocks now being cast.

Drainage and Plumbing.—External runs complete and tested. Vertical work in ducts continuing, particularly with regard to RWP's. Work in lavatories and to serveries continuing to 40·00 and 53·00 levels with the exception of stairblocks 9-12.

Heating and Ventilating.—Pipework continuing in boiler house and to vertical risers; floor heating panels are on site but have not been laid. Ducting is continuing in auditorium to structural floor and to vertical risers; also to lavatories up to 40·00 level. Two fans for the kitchen plenum room have been delivered.

Electrical.—Fixing of conduits continuing to 40·00 and within the auditorium to orchestra platform and practise rooms beneath. Main cables expected to arrive on site shortly when area is available for drums, also wiring at lower levels expected to commence as soon as auditorium is water-tight.

Gas.—Laying of 15-in. main along SW and NW elevations commenced. Internally, the majority of the vertical risers are installed as high as possible, with branch connections being made to kitchen and serveries.

Automatic Sprinklers and Fire Hydrants.—Connection made to air pressure sprinkler tank; fire pump being installed, main pipework continuing to auditorium and wings.

Vacuum cleaning plant.—Majority of vertical risers in position and sub-contractors expect to position plant in basement shortly.

Portland Stone.—External cladding to stairblocks 1-4, 5-7 on NW and external faces fixed to approx. 64·00.

Suspended Ceilings.—Special acoustic ceiling is being fixed in the wings to the main foyer.

Solid Plasterwork.—Continuing to kitchen and staff areas.

ROYAL FESTIVAL HALL: 5

Progress report by John Eastwick Field and John Stillman on services (part one)

Because the Royal Festival Hall has to be finished by 1951, much of the designing has had to be done concurrently with the building operations. In the early stages it was necessary to decide upon the structure and to give only preliminary consideration to such matters as finishes and services.

In order to accommodate the plant and the ducts and pipes, provision was made by allotting exact space where this was known, and by anticipating what would be required elsewhere in order to house as many of the service pipes as possible. The planning of the lavatories is a typical example.

As has been described earlier, openings were formed in the concrete structure while it was being poured, and in this way provision for nearly all the complex service runs was made.

There can be no doubt that, however tedious it may be, it is more satisfactory to reach final decisions about services before building starts, but this is rarely possible nowadays.

In the circumstances in which the Royal Festival Hall has been planned, it has been no mean achievement to fit the pipe work in as neatly as has been done, and to have overcome the difficulties involved in the overall design of the services.

The notes which follow do not touch upon the heating, ventilation and fittings, to which much thought and care in selection has been given; nor upon the layout of the electrical supply, the gas installations, telephones, kitchen equipment, etc. A description of the heating and ventilation, and of the lighting and electrical layout, together with notes on the sanitary and other fittings, will appear in later reports.

One technical point which is common to all the services is that the pipes and fittings all conform to the relevant British Standards, where these exist, and tubes are coloured in accordance with the BS colour code.

DRAINAGE

Although the drainage of a building of this size and character is complicated and difficult, there is, in fact, nothing very exceptional about the scheme evolved, which conforms in every respect with requirements of the local authority, the Lambeth Borough Council.

If one compares detailed parts of it with other similar schemes, one cannot help being impressed by the fact that opinions differ very widely as to what ought to be quite simple matters of principle, especially in matters of venting and trapping, and that there is very little factual knowledge on which one can rely for guidance in design. Each local authority has very definite ideas, based on its bye-laws, to which every drainage scheme has to conform, and no exception was made for the Festival Hall scheme.

One of the special problems in this scheme was that the combined sewer in Belvedere Road was only 15-in. in diameter, and was considered unsuitable for the additional load. To overcome this, it was necessary to extend the sewer from Sutton Walk to the Hungerford Approach, but even this sewer was found to be sluggish, owing to the very shallow fall which could be obtained. Its size is 3 ft. 9 in. by 2 ft. 6 in. The levels dictated the general layout which is shown diagrammatically.

The materials used for the external drains, manholes, etc., are as follows:—Pipes, cast iron; access chambers, 9-in. brick, enclosing sealed cast iron bends and fittings; manhole covers, cast iron, recessed to receive finish; pipes (internally), copper above basement, cast iron below; vent pipes, copper.

WWP's to ranges of wc's are mostly of the continuous tank type and are concealed, together with all pipe work, in large ducts.

One of the wasteful parts of most schemes is the usual arrangement of vent pipes on ranges of lavatory basins. A neat method of dealing with vented ranges is shown in the typical detail from this building. The welded joints contribute to the efficiency of the work and, for speed and neatness, the lavatory basin ranges are to be made in advance and assembled on metal-faced ply panels, as shown in the drawing. Each basin is separately trapped in order to make sure that no complete range shall be out of use, as may happen when the system using only one trap is employed.

The traps used are deep seal "Econa" traps in chromium plate finish. "Bottle" traps, which were considered desirable for the job, are not permitted by the Lambeth Borough Council, in whose area the building is being erected, and they have therefore not been used.

Facilities for washing down are required in wc's in public buildings under the *LCC General Powers Act, Places for Public Entertainment—Protection from Fire, Pt. IV, Sanitary Provisions.* Open trapped gulleys have therefore been incorporated internally in the women's wc's, but in the men's wc's the urinal wastes serve this purpose. In the kitchens, where such facilities are also considered necessary, specially designed removable covers have



Inside the auditorium. The side walls are complete, the inner skin of the roof is being laid and the casting of the balcony is in progress.

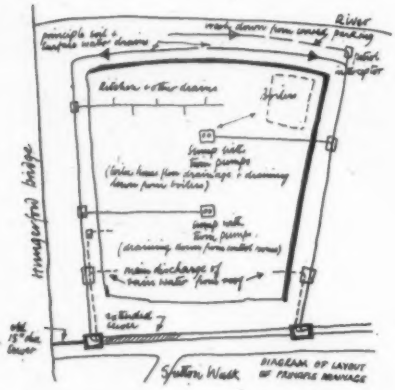
been provided. No grease traps are considered necessary because of the current use of detergents which counteract any accumulation of grease before the soiled water enters the drain.

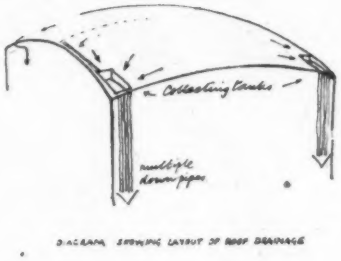
WATER SUPPLY

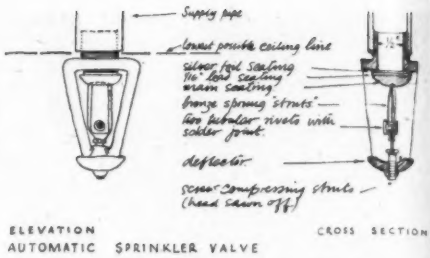
The water supply is taken from one main supply in Belvedere Road and is boosted, owing to lack of head, by a pump in the basement, through a ring main, from which there are four risers to four 3,000 gallon cast iron sectional storage tanks. These are housed at the top of the building over the staircase towers, with minimum heating provided to prevent freezing. In addition, there are two 3,000 gallon soft water tanks. Each tank is divided into two equal parts, fitted with separate valves and down-feeds as a safeguard to the supply. The pump is fitted with a by-pass, and the water is filtered at this point. The ring main is in spigot and socket cast iron pipe. Risers are in copper. Supply pipes—copper, but iron is used where there is the possibility of mechanical damage.

All copper supply pipes are gas welded. This method is considered to be cheaper than other forms of jointing on a job of such size and is, of course, carried out very neatly.

Copper was chosen partly because other materials were on long delivery, and also







AUTOMATIC SPRINKLER VALVE

The valve operates at a temperature of 155° F. The heat fuses the struts, releasing the valve seat and covering approximately 100 sq. ft. with water.

because in congested spaces it has the merit of occupying less room. Brass stop valves are used for pipes up to 2 in. dia., but for larger pipes c.i. gate valves have been chosen for the sake of economy. All materials and fittings are subject to the bye-laws of the Metropolitan Water Board, and are tested, in addition, by the LCC's own testing laboratories in the Departments of the Medical Officer of Health and of the Chief Engineer.

In planning the water services, provision has had to be made for:—Drinking supplies, external washing down, the supply of softened water to the hot water boilers and the topping up of heating boilers. (The three hot water boilers are of similar design to the heating boilers which will be described later.)

A difficulty often arises over the discharge of overflows in basement areas and in internal lavatories. The Metropolitan Water Board require that such overflows shall create a nuisance. In this scheme they discharge over the sinks at high level with a 6-ft. drop.

RAIN WATER DISPOSAL

The problem of draining the large auditorium roof was difficult to solve, especially as it was decided that the down pipes should be restricted to the corners of the building. In order to carry out this decision, the scheme shown diagrammatically was adopted, and the sizes of pipes, etc., were based on the assumption of 2-in. rainfall per hour, with a requirement of 1 sq. in. of cross sectional area of down pipe for each 80 sq. ft. of roof area to be drained.

The gutters are covered by two ¾-in. layers of asphalte on screed, and are not in copper, since it was felt that the copper might suffer mechanical damage, and would also be subject to excessive movement in the lengths involved. The rainwater pipes are in spun cast iron, because normal cast iron could not be obtained in time. Spun cast iron pipes have been widely used abroad and for mining and agricultural work, on account of their strength, but have not generally found favour with local authorities.

VACUUM CLEANING

Central vacuum cleaning plant is installed to aid cleaning of carpets, upholstery, etc., in the auditorium. This system was chosen in preference to the use of independent cleaners, because it was considered that available portable machines were not robust enough. There was thought to be a particular danger of such machines being pulled down the steps.

The plant is situated in the basement and consists of a "Sturtevant" motor-driven, multi-stage, turbo-exhauster linked to two dust separators each with removable bins. A piping system serves flush hose connections situated in the floor steppings of the auditorium. The pipes are Class B, screwed MS, and vary from 4 in. to 2 in. in diameter. The plant is designed in such a way that six operators are able to work at once. Each uses a 40-ft. length of 1¼-in. dia. reinforced rubber hose, and has the choice of five types of suction fittings. The plant is the standard design of the makers.

FIRE APPLIANCES

A general scheme for fire precautions is as follows: Stores, sprinkler system; covered car park, sprinklers, sand buckets, fireproof blankets and extinguishers; projection room, planned but not fitted at present; remaining parts of building, including auditorium, covered by hydrant/permanent hose-reel points.

The hydrants are fitted with adaptors for a 1-in. rubber hose, which serves to confine the fire. The adaptor can be removed when the fire brigade arrives, and so that the hydrant may be used with brigade equipment. This is a post-war development. Previously, the Fire Brigade insisted upon 1¼-in.-2½-in. hose, but such equipment could only be used by trained personnel, and was not often used before the arrival of the brigade.

The supply for the hydrant/hose points is pumped from the town's main, through a 6-in. heavy-gauge galvanized pipe.

SPRINKLER INSTALLATION

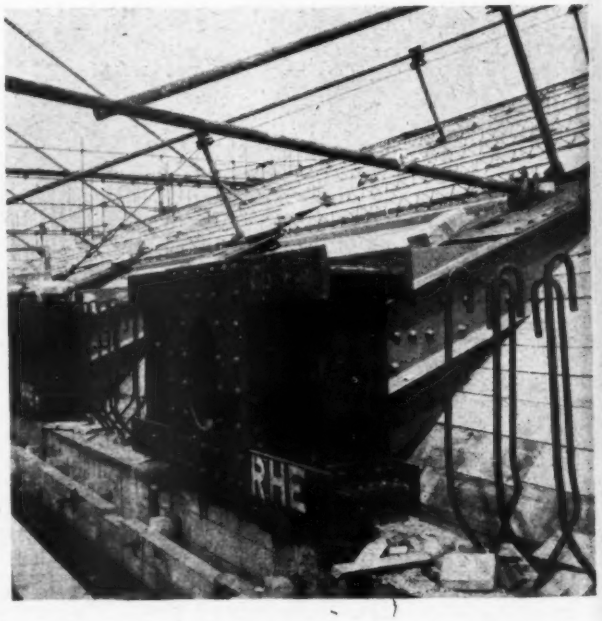
Generally, the LCC demand the installation of sprinklers in buildings used for trade or industrial purposes exceeding 250,000 cu. ft. capacity, and in stores and other ancillary rooms in places of public entertainment. The installations are required to comply with the rules of the Fire Office's Committee as regards design, but in many cases the provision of two approved and independent supplies is insisted upon.

Rebates of up to 60 per cent. in premiums for fire insurance have been permitted in certain circumstances where sprinklers have been installed.

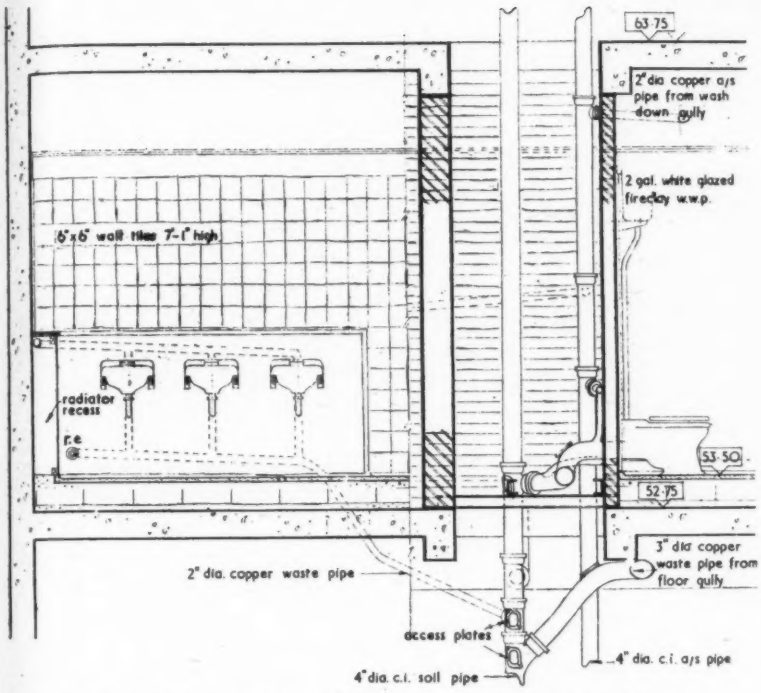
A 6-in. connection is taken from the town's main, but as a stand-by, which is independent of any public service, there is a cylindrical tank, 30 ft. by 7 ft. in diameter, of which one half contains 3,300 gallons of water, the remaining half being filled with compressed air at 120 lb. per sq. in.

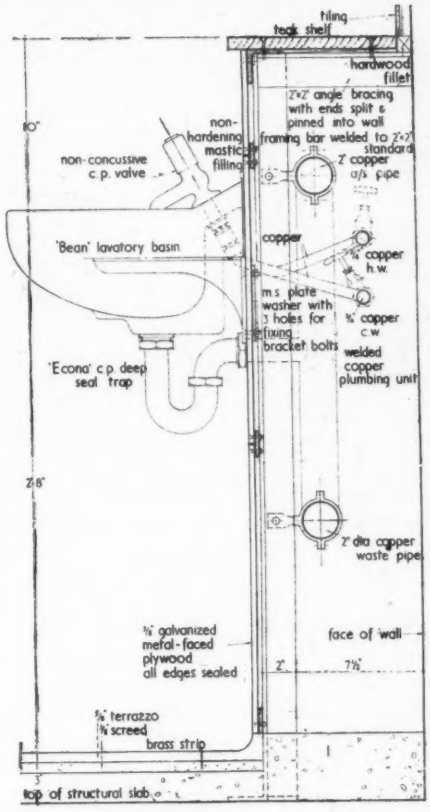
The distribution pipes are always full of water, and there is one valve per 100 sq. ft. (modified as necessary by the construction).

The sprinkler fuses when temperature reaches 155° F., and thus the discharge of water is limited to the immediate vicinity of the fire.



Right, reading from left to right: the roof with Triad beams and infilling slabs in position ready for in-situ concrete topping; the splayed bearing plate on which the main truss is seated; a Triad beam resting on the runner attached to main truss.



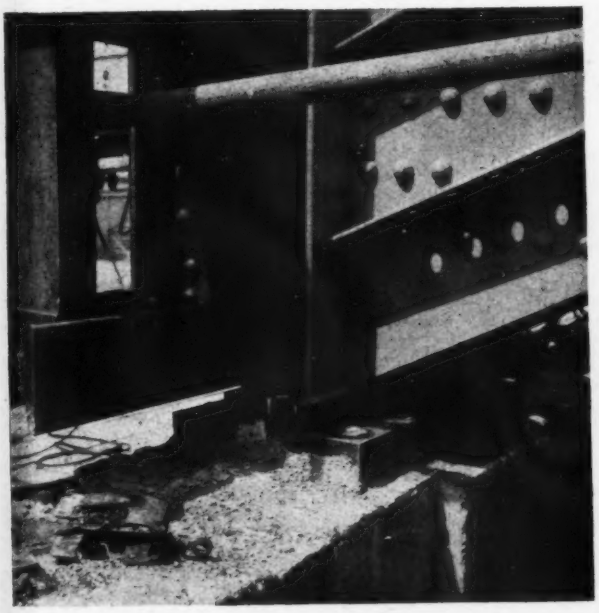


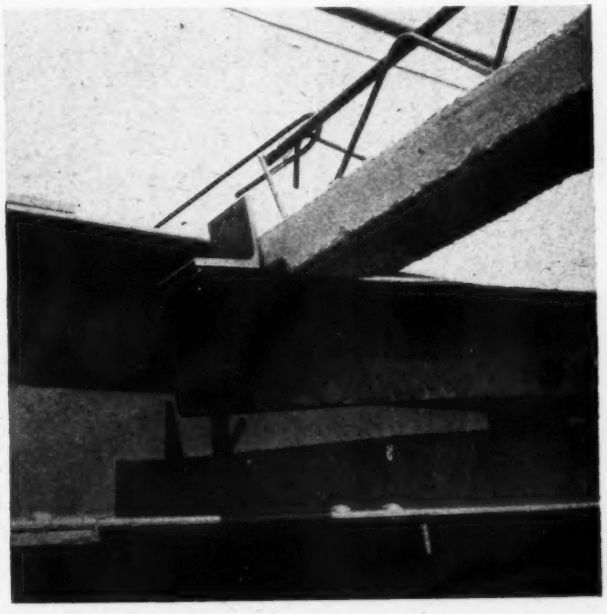
Above, typical detail of men's lavatories showing large duct to accommodate pipework; trough type water waste preventors are also used and are placed in the duct. [Scale: $\frac{1}{4}$" = 1'0"]. Right, detail showing "Bean" lavatory basin with "Econa" c.p. deep seal trap. The basins are fixed direct to metal faced ply covering and a preformed welded copper plumbing unit. The two drawings have been made from working drawings kindly lent by the Architect to the Council.

An external " wet and dry " system is used in the covered car park, where pipes may be frozen in winter. During cold weather the system is arranged so that there is compressed air in the pipes instead of water. In the event of fire, the reduction in pressure activates a differential valve, which allows water to flow through the system almost immediately.

The sub-contractors and suppliers for the services discussed are :—

Drainage, plumbing and water supply ..	Matthew Hall & Co.
Water softening plant	Permutit Co., Ltd.
Tanks	Matthew Hall & Co.
Traps	Econa, Ltd.
Sanitary fittings	Messrs. Adamsez.
Sprinklers	The Automatic Sprinkler Co., Ltd.
Vacuum cleaning plant	Sturtevant & Co., Ltd.





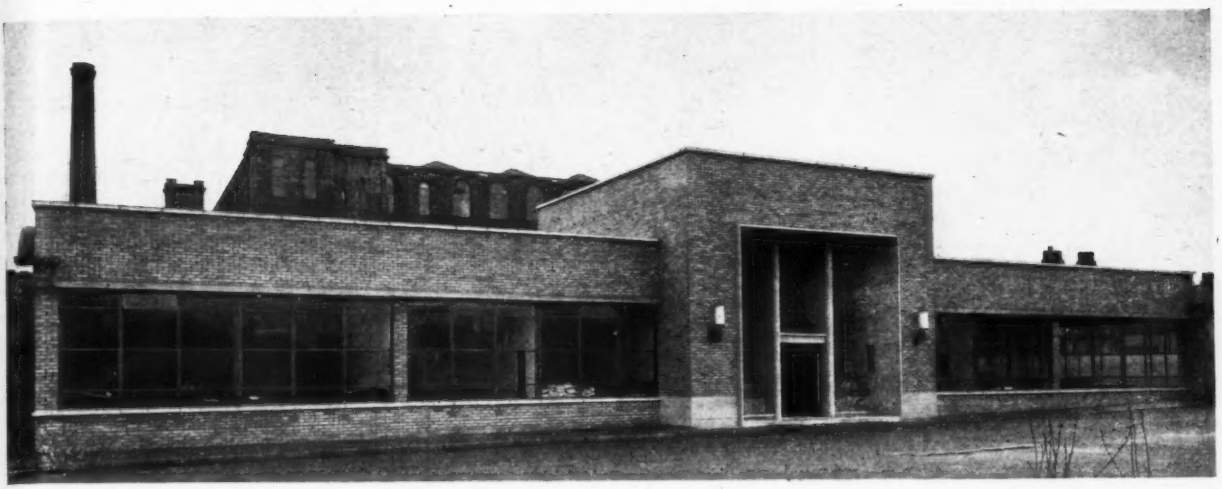
OFFICES

at ORDSALL LANE, SALFORD, LANCASHIRE
designed by HARRY S. FAIRHURST & SON

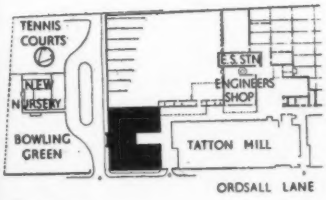
The administrative offices for Richard Haworth & Company's factory replaces buildings destroyed by enemy action in 1940. The building is bounded on the north-west by a lane, on the south-west by the main factory goods entrance and on the south-east by the weaving shed. The private offices and drawing office on the north-east side overlook a car park and bowling green belonging to the Company.

The general office.

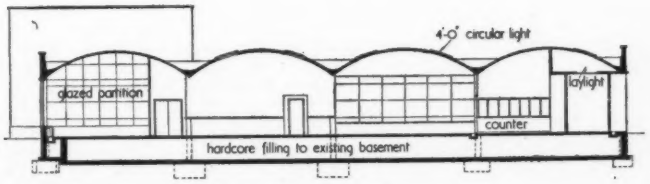




The north-east elevation.



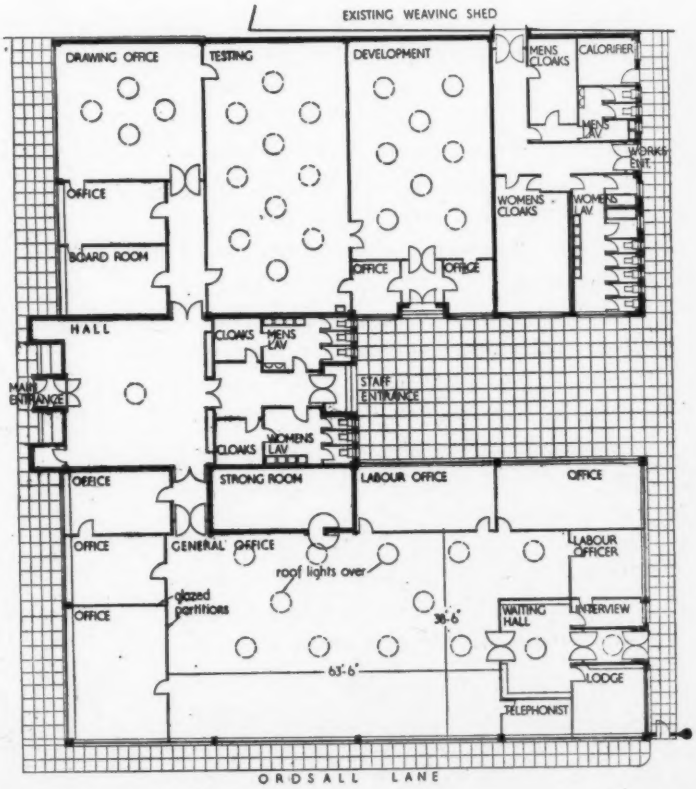
Site plan



Section through general office and waiting hall.

PLAN.—Accommodation is provided for a general office, private, drawing, labour and personnel offices, works lavatories, development and testing rooms and a showroom combined with hall. Access to all departments of the factory is from the main entrance. There is no direct connection between the works lavatories at the south end of the building and the rest of the building. The testing and development rooms are adjacent to the weaving shed.

CONSTRUCTION.—General construction: reinforced concrete frame. Walls: 11-in. cavity construction. Roof: barrel vault construction, 3-in. thick, each section 25-ft. 6-in. wide and 51-ft. 9-in. long, except over the hall and staff lavatories. The roof is ½-in. thicker than is structurally necessary in order to contain the lighting conduits. Roof lights: 5-ft. diameter circular, double glazed. Window frames: purpose made.

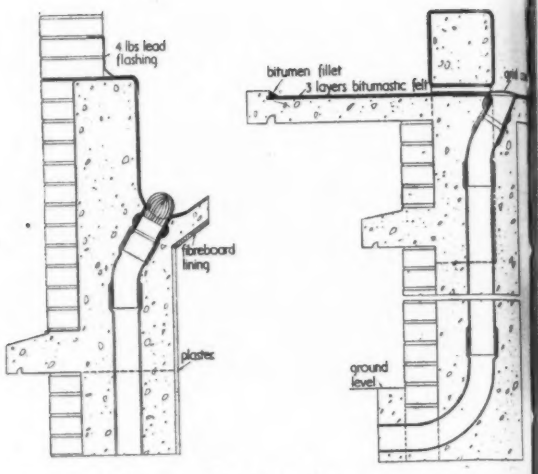


Floor plan [Scale: 1/16" = 1'0"]

D

OFFICES

at ORDSALL LANE, SALFORD, LANCASHIRE
designed by HARRY S. FAIRHURST & SON



Details of rainwater disposal at edges and ends of barrel va
[Scale : ¾" =

EXTERNAL FINISHES.—Main entrance : 2⅝-in. cream facing bricks, York stone fins, 7¾-in. square glass bricks, bronze doors with glass panels. All other elevations : 4½-in. brick skin. Rain water pipes : 4-in. diameter, cast iron.

INTERNAL FINISHES.—Hall : floor, grey carpet ; walls, walnut panels with horizontal graining, each panel divided by ½-in. recessed sycamore strips ; ceiling, suspended. General, labour and drawing offices : floors, cork composition tiles, marble pattern ; walls, plastered, painted off-white ; cills, terrazzo ; partitions, glazed ; ceilings, building board, painted blue, green in drawing office. Private offices : floors, fitted carpets ; walls, plastered and papered ; cills, terrazzo ; ceilings, asbestos material sound-absorbent tiles. Testing room : floor, red granolithic ; walls, cork lined, plastered, water-bound paint ; ceiling, asbestos insulation spray 1-in. thick ; roof lights, triple glazed. Staff lavatories : floors and partitions, grey terrazzo ; walls, pink opaque glass ; ceilings, plastered. Works lavatories : floors and partitions, green terrazzo ; walls, cream tiles ; ceiling, plastered, anti-condensation paint.

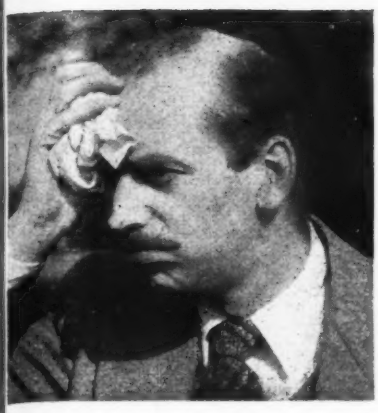
SERVICES.—Lighting : 120 w. 4-ft. cold cathode fluorescent tubes fitted with reflectors, flush to ceiling. Heating : calorifier from main factory boiler, pipes carried in floor trenches, radiators, electric radiators under window cills, with 9-in. by 1½-in. bronze grills over at window cill level.

The general contractors were J. Gerrard & Sons, Ltd. A list of sub-contractors appears on page 776.

Below, the testing room. Bottom, the hall.







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TECHNICAL SECTION

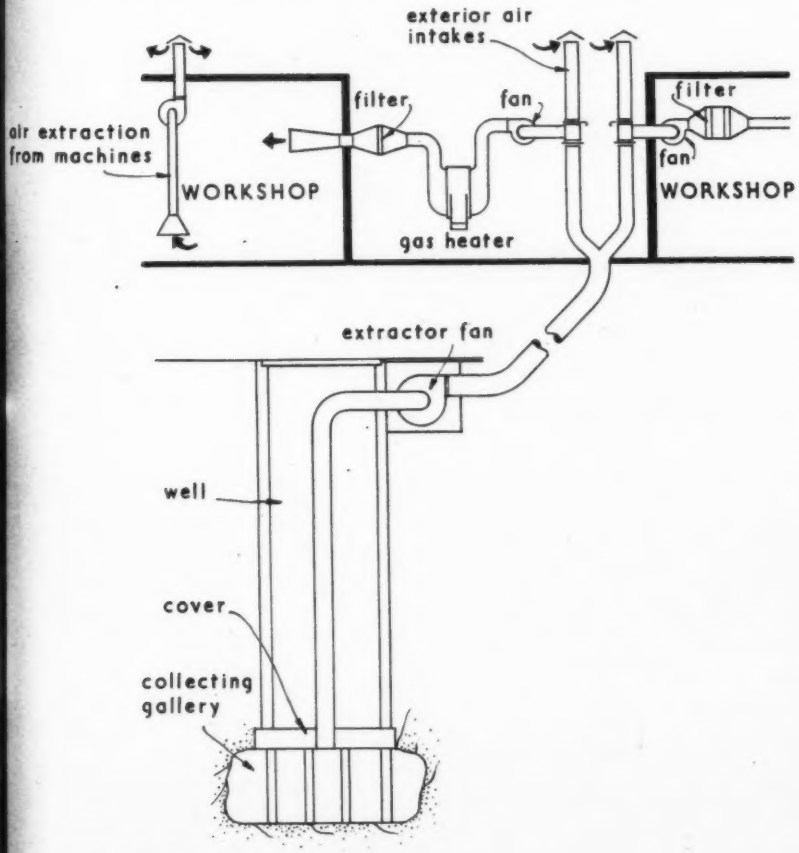
ON KEEPING COOL

How pleasant it is, on a very hot summer's day, to enter a cave or a massive building and to enjoy for a short period the pleasant cool environment due to the slowness in heating up of a larger mass of stone or earth. When one emerges the heat seems to be almost stifling. The daily task under conditions of great heat is particularly tiresome, and we envy people whose occupation entitles them to work in air-conditioned buildings. We know, however, that air-conditioning, on a scale to cope with summer temperatures, involves heavy expense and complication in refrigerating machinery, so that it is a luxury to be enjoyed by the few.

But is it? A paper* describing some experiments, and a full scale installation recently completed and now working in France, suggests that there are possibilities of air conditioning at a much lower cost than by refrigeration in suitable localities. The title of the paper "Wealth unexploited; air from the soil" gives the clue.

The essential principle underlying the idea is simple. Air flows reasonably freely through porous and fissured soils, and at a sufficient depth below the surface is cooled in summer and warmed in winter due to the "thermal inertia" of the enormous mass of material in the soil. It is commonplace that caves and deep cellars maintain a constant temperature in the neighbourhood of 50 deg. F all the year round. In the developments in France, described in the paper in question, a well is sunk to a depth of the order of 50 feet into porous soil and a collecting gallery is driven from the bottom of the well. The bottom of the well is sealed off and air is drawn from the gallery through suitable ducting by air extractor fan. The air is replenished by passing down through the soil to the gallery and in doing so is cooled in summer and warmed in winter to the soil temperature. The air is passed from the fan to the building where the conditioned air is required, being blended with warm air from out-of-doors in summer, and being heated up to the required temperature in winter.

* *Annales de l'Institut Technique du Batiment et des Travaux Publics.* No. 7, Nouvelle série, May, 1950. Une Richesse Inexploitée: l'air du sol. Mon. E. G. Leau, Ingénieur.



Diagrammatic sketch of layout of "air-well".

The arrangement for the installation now working in France is shown in the diagram. The workshop, of about 13,500 cubic feet capacity, required for the process carried out in it a ventilating air change of 146,000 cu. ft. per hr. and the maintenance of a constant temperature of 76 deg F, whatever the season, even when the outside air temperature was approaching 90 deg. F. In the installation described in the paper, a trial was run in July-August, 1949, when about 400,000 cu. ft. of air per hour was drawn from the collecting gallery. Over the whole summer the temperature of the air so collected varied less than 1 deg. from 57 deg. F. The author of the paper calculates that the running costs of cooling by air from the soil and cooling by refrigeration on the basis of his experience to date to be in the rates of 21 : 110. The capital cost of the refrigerating installation could well be much higher than the air well. Other aspects are discussed and may be important. Suitable soils will have a filtering value and may be useful for civil defence purposes.

The essential conditions to be satisfied are simple:—porous soil strata from the surface to the collecting gallery; a water table so low that the ground water never rises to the collecting gallery. One would hazard a guess that there are enormous areas in the chalk and limestone districts of Great Britain where these conditions would be satisfied.

Well then, here's a new idea. Coolness in summer, and a very useful heat gain in winter, a point which we have not discussed at any length as being an unseasonable subject at the moment.



A digest of current information prepared by independent specialists; printed so that readers may cut out items for filing and paste them up in classified order. Headings below.

INFORMATION CENTRE

6.24 planning: social and recreational
SMOKE ABATEMENT

Guide to Publications on Smoke Prevention and Allied Subjects. (National Smoke Abatement Society. 2nd Edition, 1950.)

List of about forty books, reports and pamphlets of current interest on smoke prevention, atmospheric pollution and fuel usage.

Copies can be obtained on application to the National Smoke Abatement Society, Central Offices, Chandos House, Buckingham Gate, Westminster, S.W.1. (Abbey 1371.)

6.25 planning: social and recreational
TOWN PLANNING AND HEALTH

Town Planning and Health. Gilbert Cowan. (J. of the Royal Sanitary Institute, May, 1950.)

Review of problems concerning standards of health in towns.

This paper, by the Borough Engineer and Surveyor of Stockton-on-Tees, discusses some problems of public health, including factors relating to: redevelopment of central areas of towns; sewers and sewage disposal; atmospheric pollution; refuse collection; cattle markets and public abattoirs; housing estates; and burial and cremation.

The author mentions that in coastal towns the problem of treating sewage for discharge into tidal waters is one of great magnitude. While in future housing estates it would be desirable to provide separate soil and surface water systems, it is an aim, however, which is likely to remain in the long-term class.

On the subject of atmospheric pollution, it was observed in the discussion which followed the paper that special appliances for burning solid fuel inevitably cost more than the simple grate, but they must be straightforward in use, otherwise the much-needed reduction in pollution, particularly in industrial towns, would not be obtained, and no benefit would be obtained from the extra expenditure.

1 Sociology. 2 Planning: General. 3 Planning: Regional and National. 4 Planning: Urban and Rural. 5 Planning: Public Utilities. 6 Planning: Social and Recreational. 7 Practice. 8 Surveying, Specification. 9 Design: General. 10 Design: Building Types. 11 Materials: General. 12 Materials: Metal. 13 Materials: Timber. 14 Materials: Concrete. 15 Materials: Applied Finishes, Treatments. 16 Materials: Miscellaneous 17 Construction: General. 18 Construction: Theory. 19 Construction: Details. 20 Construction: Complete Structures. 21 Construction: Miscellaneous. 22 Sound Insulation-Acoustics. 23 Heating, Ventilation. 24 Lighting. 25 Water Supply, Sanitation. 26 Services Equipment: Miscellaneous: 27 Furniture, Fittings. 28 Miscellaneous.

20.182 construction: complete structures
LIGHT ALLOY STRUCTURES

Light Alloys as Structural Materials. Geoffrey Wood. (RIBA Journal, April, 1950, pp. 218-224.)

Architectural Science Board lecture, with ten contributions to the discussion. A well-balanced survey. Very useful to the architect. 13 illustrations.

Since the end of the war, arguments for and against the use of aluminium alloys in construction have been numerous, and the discussion can be expected to go on for some time to come. It is typical of the case where the use of a material having desirable technical qualities is conditioned by cost. There is fairly general agreement on the advantages of aluminium in a number of applications. Certain achievements are common knowledge amongst architects: the aluminium houses, thousands of which were produced on airplane production principles, both for the housing drive in this country and for export overseas; the huge doors for the Brabazon hangars; the framework for glass houses, and a number of bridges, especially movable ones. The structural use of aluminium alloys for exhibition purposes is a separate chapter; impressive designs could be seen at Olympia and elsewhere, and still bolder structures in aluminium have been designed for the 1951 Festival. It is the more important to clarify the fundamentals and to realize where we stand and where we go from here. The lecture by Mr. Wood provided a sound and thorough basis for discussion at the RIBA. His paper appeals to the listener's or reader's good judgment. It avoids sweeping statements and presents the present state of affairs in a sober way.

Pure aluminium has only about 5 tons per sq. in. ultimate tensile strength, far too little to make it of any use for transmitting structural loads. By alloying it with small percentages of certain metals and by suitable heat treatment its properties can be improved to such a degree that they may even compete with those of structural steel. The lecturer recommends use of one of these alloys as the basis of structural design, namely, that with the British Standard designation HE 10WP (AW 10B), with a ·1 per cent. proof stress of 15 tons per sq. in., an ultimate tensile strength of 1[illegible] tons per sq. in., and a minimum elongation of 10 per cent. on a 2-in. gauge length. He recommends this alloy as a happy mean of the wide variety of aluminium and magnesium alloys, especially as its proof stress comes near to the yield point of structural mild steel, which is about 16 tons per sq. in. The duralumin series of light alloys (alloyed with copper) includes one with properties even exceeding those of mild steel, with 26 tons per sq. in. proof stress and 30 tons per sq. in. ultimate tensile strength. The tables given by the author will be useful also for another reason. They give the old and the new designations side by side for each alloy, and should thus make it easier for the designer to find among a forest of letters and numbers which in the past may well have been one of the reasons for retarding the introduction of light alloys.

The paper also deals with the practical aspects of a small modulus of elasticity which is only about one-third for light alloys compared with steel. It gives a de



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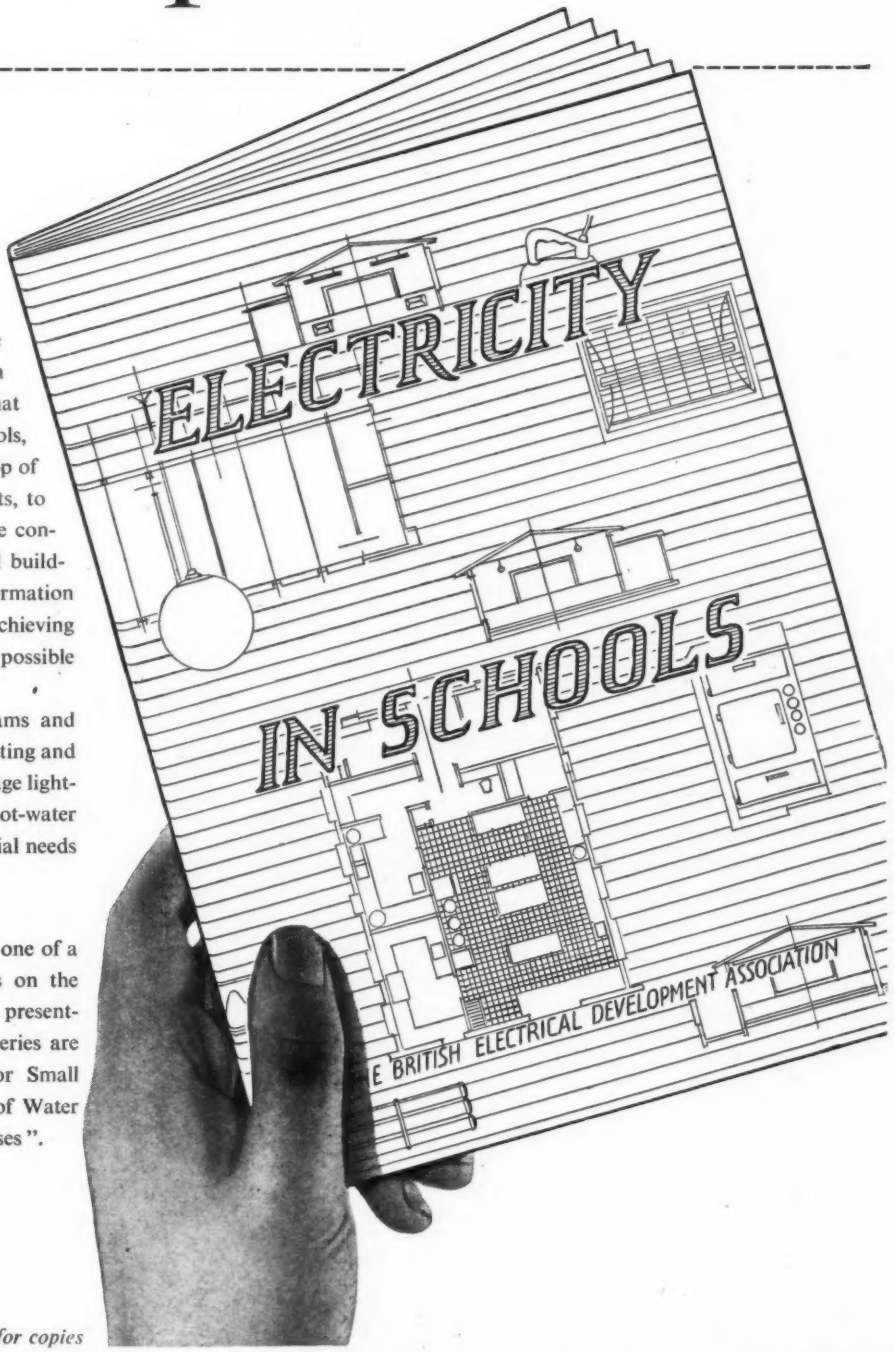
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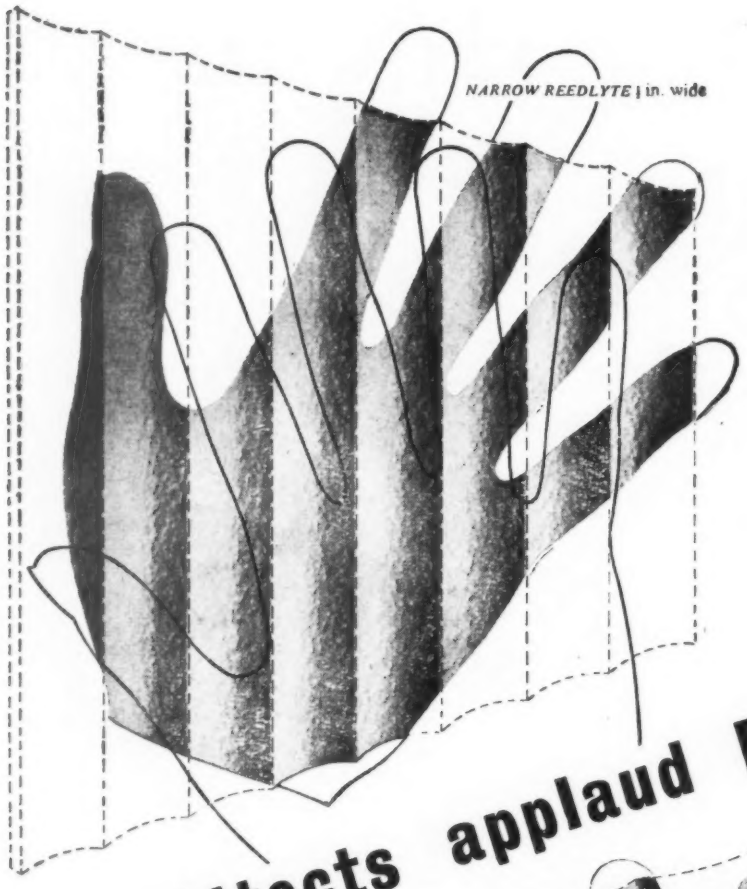
It is illustrated with diagrams and plans, and has chapters on lighting and heating, kitchen equipment, stage lighting, homecraft rooms, the hot-water systems best suited to the special needs of schools, and wiring.

E.D.A PUBLICATIONS

" Electricity in Schools " is one of a series of E.D.A publications on the application of electricity to present-day planning; others in the series are " Electric Kitchen Design for Small Houses " and " The Design of Water Heating Systems in New Houses ".

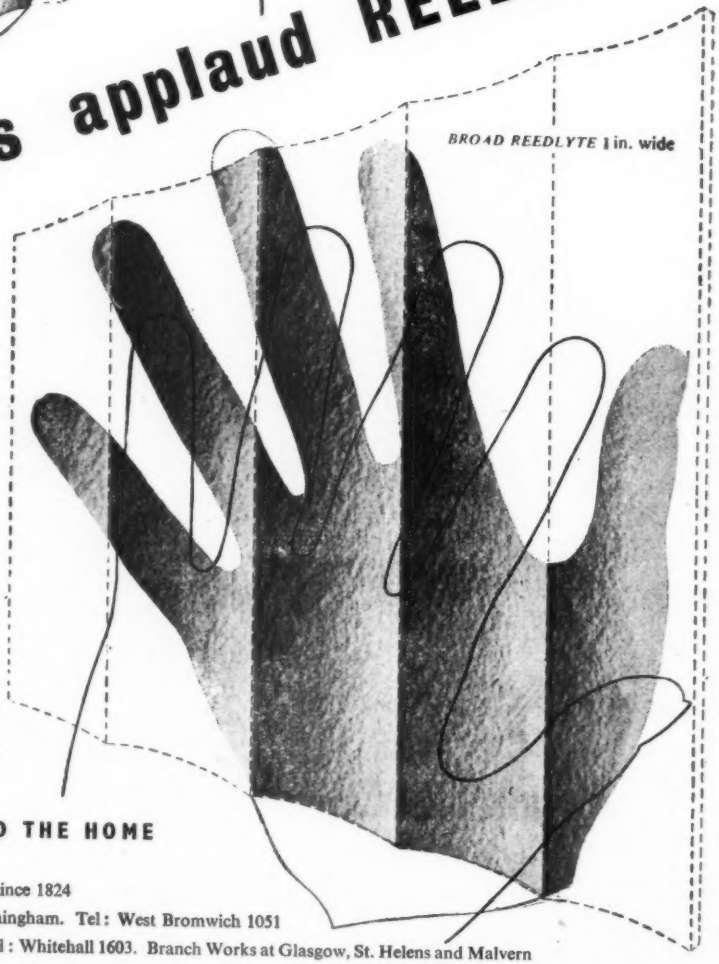
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scription of the extrusion process, deals with problems of fabrication of light alloy structures, the making of joints by riveting or bolting, while welding, only shortly mentioned in the paper, was dealt with in the discussion. The relation between cost of materials and cost of fabrication both for steel and for light alloys is dealt with in a most interesting way and deserves the designer's careful study.

22.46 sound insulation and acoustics
QUALITY

Effect of Room Characteristics upon Vocal Intensity and Rate. J. W. Black. (Journal of Acoustical Society [USA]. Vol. 22, No. 2. March, 1950. p. 174.)

Room size, shape and reverberation studied in relation to loudness and rate of speaking. Technical, useful results.

Some results merely confirm ordinary observation. Thus people are shown here to speak slowly in large rooms or dead rooms and quickly in small rooms or in more reverberant rooms. More significant is the fact that vocal intensity was greater in the smaller and dead rooms, and especially tended to increase with time in the dead rooms and to decrease in the live rooms. Shape had no apparent influence.

We have been warned in the past of the dangers of over-reverberant rooms. They blur the phrases and now we know they tend to make people speak quickly. We must be equally on guard against the dead room, which not only limits the spread of sound but obviously will tire the speaker.

24.135 lighting
LIBRARY LIGHTING

Recommended Practice of Library Lighting. Committee on Library Lighting of IES (USA). (Illuminating Engineer [USA], March, 1950, p. 185.)

The job; environmental factors, brightness, colour; recommended values; daylight and artificial sources; details for different rooms. Useful, illustrated 15 figures.

So far as the visual work is concerned, there is only reading to consider. The report reviews the difficulties with book stacks and for long-period reading as the critical problems. Their recommendations for intensities follow the course of their argument on the ease or difficulty of different kinds of reading, and range from 5 to 50 foot candles.

The term "environmental factors" now always includes brightness ratios, but these are still difficult to connect to architectural practice. There is a useful table of recommended ratios from which an interested architect could learn useful lessons if he carried in his mind the fact that brightness is a function of reflective factors of the surfaces and the light falling on them. In this report the recommendations are carried to the point of deciding what reflection factors are desirable in various surfaces in the rooms and on the desks and are therefore directly helpful. The remarks on colour are platitudes or worse.

The daylighting section is chiefly a recommendation to refer to another of the IES reports. Artificial lighting is elaborately discussed, and there is much useful information. It seems, however, that American committees have even more difficulty than British in committing themselves to any course of action affecting one group of manufacturers differently from another. They tend to commend equally fluorescent and filament lamps and all systems where they are "well done."

A point to bite on is the view that general lighting can now be so good that supplementary table lighting can often be dropped. This is contrary to growing British views which are that general lighting can rarely provide as good lighting as when it is supplemented. Where supplementary lighting is recommended, descriptions of recommended fittings are included. Despite these criticisms, the detailed suggestions for treatment of various styles of rooms (rehabilitation is borne in mind) and of stacks are worthwhile.

24.136 lighting
CLASSROOM DAYLIGHTING

Daylighting in School Classrooms. D. D. Harrison. (Municipal Journal, Feb. 3, 1950. p. 308.)

Computing daylight factors: example classroom.

Architects of local authorities should find this a convenient reference to refresh them on working out the daylighting of classrooms, or any other rooms. There is a very clear and well illustrated description of the technique of computing daylight factors, and Mr. Harrison reviews in detail a classroom which was consciously designed to meet Regulation 39. There is also a brief glance at the problem of lighting the blackboard (for which a "bull's eye" is used) and the reduction of glare. It is claimed that the lighting of the room is excellent.

25.76 ventilation
DIRT AND VERMIN

Precautions Against Vermin and Dirt. BS C of P, CP3, Chapter X. (British Standards Institution. 1950. 1s.)

General advice which takes five pages to say very little that is not completely obvious to anyone of even moderate intelligence.

26.64 services and equipment: miscellaneous
CORROSION OF COPPER WATER PIPES

Copper Water Pipes. British Non-Ferrous Metals Research Association. (The Plumbing Trade Journal, April 15, 1950, (Vol. 29, No. 11) 1s.)

Report on recent investigation into corrosion of copper water pipes by the British Non-Ferrous Metals Research Association.

The question of corrosion of copper water pipes has attracted considerable attention recently, and this authoritative statement by the BN-FMRA will be welcomed.

The general conclusion reached are these:—

1. There is no evidence to suggest superior corrosion resistance for either Tubes to BS 659:1944 or BS 1386:1947. The evidence is that the two materials, BS 1172:1944 and 1174:1944 are equally satisfactory if free from a carbonaceous film.

2. There is strong evidence that this film, produced by some manufacturing conditions, results in pitting.

3. This pitting does not occur, even where the film is present, with most waters in this country.

4. There is no definite evidence yet available as to the effect of such films on tubes used in hot water systems.

These conclusions are based on the following information:—

1. Green staining in baths, basins, etc., is to be found with waters having a high free CO_2 content. This is due to slight uniform corrosion which does not appreciably reduce the life of the pipe.

2. Pitting corrosion may cause failures due to pinhole leaks, with a small number of supply waters. It may occur with hot and cold systems, but only rarely with the same water in both. Hot water pitting is usually to be found with soft moorland waters: cold water pitting with moderately hard bore hole waters. Recent research shows that most water contains a natural, but as yet unidentified inhibitor: where this is absent, corrosion occurs. It may be different in different waters.

3. Analysis of 104 tubes which have failed gives little indication that one composition of tube is more free from attack than another.

4. The weight of carbon in the scale removed from the interior of the failed tubes was measured: out of 80 cold water failures, 63 had more than 1·9 mgm. of carbon per square d.m, and only 7 less than 1·0: of unpitted pipes, all but one had less than 1·0. The relationship between the presence of carbon and the pitting is therefore well defined in cold water system: but similar investigations in hot water failures were inconclusive.

28.13 miscellaneous
CONCERT HALL DESIGN

Concert Halls. Hope Bagenal. (RIBA Journal, Jan., 1950, p. 83.)

Survey, design trends, audience preferences; the acoustical problem, absorption and diffusion; platforms; lighting; auxiliary plan requirement.

Contributions by P. H. Parkin on reverberation time and sound insulation; and by W.A. Allen on platform planning and lighting. Important general reference.

This feature answers any question connected with building confidentially and free of charge. Questions to the Technical Editor, The Architects' Journal, 9, 11 and 13, Queen Anne's Gate, S.W.1.

QUESTIONS AND ANSWERS

3024 SCHOOLS: CUBE COSTS

Q *I am endeavouring to prepare an approximate estimate on cubic measurement for a primary school similar in construction to one built in* 1939. *Could you tell me the relative cost per cubic foot for primary schools built now and in* 1939?

A It is not always wise to base calculations for a particular scheme on general information, and you would be advised to refer the matter to a consultant who can consider your proposals in detail and in relation to the cost of building in your locality.

A primary school (buildings and all site works other than playing fields) may well cost 3s. 9d. per ft. cube in London and the equivalent 1939 price might have been 1s. 6d. per ft. cube.

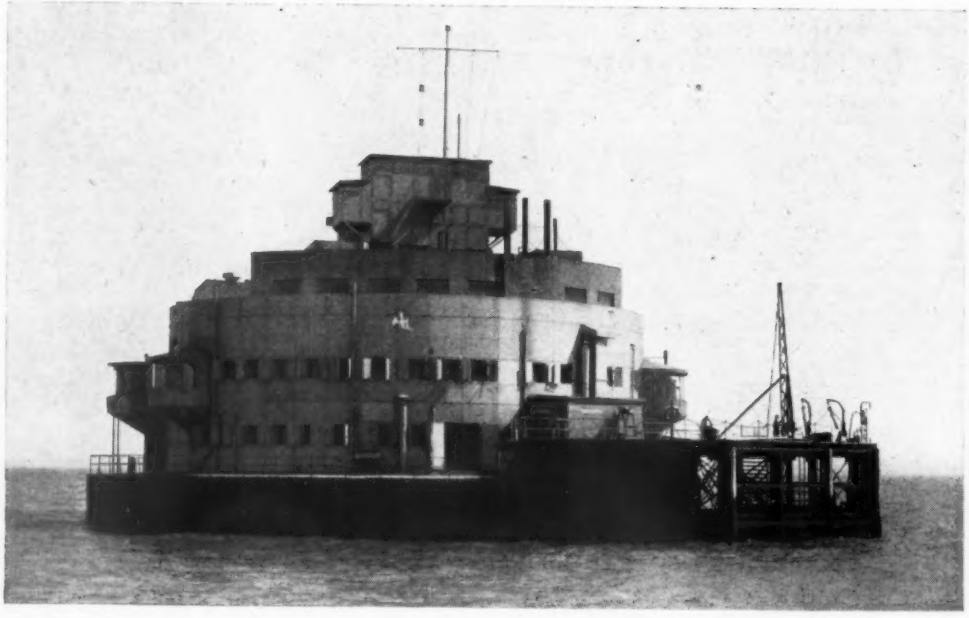
On the other hand, on September 30, 1949, *Education* gave analyses of four primary schools in Yorkshire costing from 2s. 1¼d. to 2s. 9¼d. and it is interesting to note that the cheapest price per ft. cube resulted in the highest price per place and *vice versa.*

This brings out three points which emphasise the unreliability of general information for particular purposes:— (1) costs are not uniform throughout the country, (2) the increase in cost since 1939 is also not uniform, and (3) tight planning results in a saving in overall cost or cost per place, but in a higher rate per ft. cube.

The most reliable guide for pricing schools is probably the Ministry of Education Circular 215 which lays down a maximum nett cost per place of £140 for primary schools to be started in 1951 (for definition of "nett cost" see the Circular). It should be possible to design a primary school for something under this figure if the economies laid down are put into effect.

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THE INDUSTRY

By Brian Grant

TV AERIALS

From time to time one hears rumours of housing authorities who have banned outside television aerials on the grounds that they are unsightly, or that their fitting may damage the structure of the house. While it is true that aerials lend comparatively little enchantment to the view, the banning of them altogether is a step which no authority can justifiably take unless it is quite certain that an internal aerial will give satisfactory results.

The problems involved are fairly complicated, and although there is no need to go into the technicalities of television wave behaviour, it should be pointed out that they are in some ways similar to light rays, and are reflected or reduced in strength by intervening objects to a much greater extent than the much longer waves used for sound broadcasting. The strength of the received signal, apart from being influenced by the relative positions of the sending and receiving stations, also depends on the structure of the building in which the receiving set is housed and also on the presence of any larger buildings or gasholders in the neighbourhood, which may overshadow the receiving site. For these and other reasons it is impossible to give any convenient rules on which a choice of aerial type can be made, but the various factors involved are clearly set out in a booklet published jointly by the Radio and Electronic Component Manufacturers' Federation and the British Radio Equipment Manufacturers' Association.

The primary purpose of the booklet is to show that there are many factors which must be taken into consideration before the type of aerial most suitable for any particular building or district can be decided, and it is emphasized that the crux of the matter is that these factors can be ascertained only by means of tests carried out on the site. The booklet gives the names of firms who have been providing testing facilities for some years and are ready to advise local authorities and property owners on aerial installations which will provide adequate reception for tenants without detracting more than is absolutely necessary from the architectural amenities.

Factors affecting reception are listed, communal and multi-point systems for blocks of flats are briefly described, and eight types of television aerial—of which the "H" shape is only one—are classified and illustrated. One of the diagrams is reproduced on the right. (*The Radio and Electronic Component Manufacturers' Association*, 22, *Surrey Street, London, W.C.*2.)

ROOFING AND WALLING

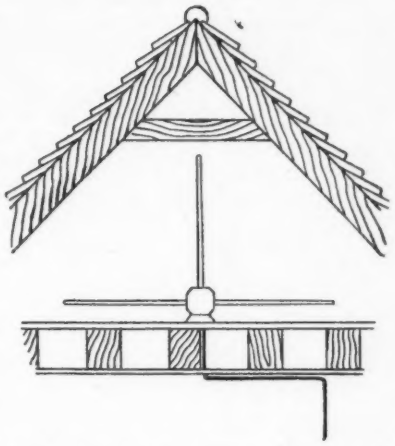
A new system of speedy and inexpensive roofing and wall cladding with hard aluminium alloy strip—which can be handled effectively by unskilled labour—has been developed by a Tube Investments subsidiary, Metal Sections Ltd., and will shortly be marketed at home and overseas. The technique seems particularly suitable for the erection of bungalows and agricultural buildings overseas.

There are two principal sections used in the system, both of which incorporate the Cookson patent lock joint. The first is a 10-in. wide roofing section in standard lengths of 10 in., 12 in., 14 in., 16 in., 18 in. and 20 in. This is laid with the joints in a horizontal position. The strips are joined one to the other throughout their length by the joint, which is formed continuously on the edges of the strip. The joint is made by snapping the formed edge of one strip into the corresponding formed edge of the adjoining strip, and once made the joint is completely weatherproof.

The second section is an 8-in. wide wall section similar in appearance to timber clapboarding; these strips are laid horizontally.

Other sections include a wide range of flashings, trims and surrounds, such as ridging, window and door surrounds, corner flashing, eaves and so on. Clips are also provided for joining lengths of sections together, and so reducing cut waste to a minimum, and for holding the roof and walls to the framework.

While generally made of aluminium alloy, all the sections can readily be manufactured in steel. (*Metal Sections Ltd., Oldbury, Birmingham.*)



Internal aerial for areas where signals are strong.

HEAT STORAGE COOKERS

Triplex Foundries have just introduced a heat storage, continuous burning cooker, which is available in two types, both with various items of extra equipment. They are of the heavily insulated type complying with BS 1252/1945, and have been approved for use on housing schemes.

The illustration gives almost as much information as is necessary. Dimensions are 39 in. wide by 31⅛ in. high, with a depth from front to back of 22 in. These figures apply to Model "V," Model "W" being slightly smaller, with a width of only 35½ in.

The cooker is also designed to supply domestic hot water, and will burn anthracite in 2-in. to 3-in. size or 2-in. gas coke, though with the latter the fire will not burn quite so long without attention. The price of the Model "W" shown here is £47 5s., less various amounts if towel rails, splash backs or insulated covers are not required. (*Triplex Foundry Ltd., Great Bridge, Staffs.*)

FABRICATED LAMINATED PLASTICS

The Plastics Division of Thomas de la Rue have just compiled a manual on the machining and fabricating of laminated plastics, together with recommendations on the general fabrication of veneered work. The booklet starts off with data of available sizes and thicknesses of Delaron, Traffolyte and Formica, and then goes on to describe the appropriate methods of sawing, drilling, moulding, cutting and the general finishing of these materials, with some useful notes on the types of adhesives most suitable for assembly purposes. There are also diagrams showing a number of methods for edge finishing either in plastic or with extruded metal sections, and the whole booklet compresses a great deal of very useful information into a mere 48 pages. (*Thomas de la Rue & Co. Ltd., Plastics Division, Imperial House, Regent Street, London, W.*1.)





Extreme left, system of roofing developed by Metal Sections Ltd. Left, heat storage cooker made by Triplex Foundry Ltd.

Readers requiring up-to-date information on building products and services may complete and post this form to The Architects' Journal, 9, 11 and 13, Queen Anne's Gate, S.W.1.

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The zinc oxide manufacturers announce that the prices of zinc oxide, in lots of not less than 2 tons, delivered to buyers' premises, are increased by £3 10s., as follows: Red Seal, new price, £105; old price, £101 10s. Green Seal, new price, £106 10s.; old price, £103. White seal, new price, £107 10s.; old price, £104.

Buildings Illustrated

Shop for Moss Bros., at 19, Lord Street, Liverpool. (Pages 760-761.) Architect: Eugene C. Kent, F.R.I.B.A., M.T.P.I. General Contractor, structural alterations: D. J. Connolly. Sub-contractors: Electrical work, Winstanley & Lambert Ltd.; installation of boiler and presses, Isaac Braithwaite & Son Engineers Ltd.; extract ventilation, Brightside Foundry & Engineering Co. Ltd.; asphalte flooring, Penmaenmawr & Trinidad Lake Asphalte Co. Ltd. General Contractors, shopfitting: Courtney, Pope Ltd. Sub-contractors: Light fittings, Courtney, Pope (Electrical) Ltd.; electrical work, Winstanley & Lambert Ltd.; plastic and bronze lettering, The Lettering Centre; ceiling and wall heating panels, Unity Heating Ltd. Nominated suppliers: Carpets and lino, Wolfe & Hollander Ltd.; lino, C. M. Bennett; lockers, Sankey Sheldon Ltd.; chairs, Heal's Contractors Ltd., store racks, Geo. H. Gascoigne Ltd.

Offices for Messrs. Richard Haworth & Co. Ltd., at Ordsall Lane, Salford, Lancashire. (Pages 768-770.) Architects: Harry S. Fairhurst & Son, F.R.I.B.A. Interior of Entrance Hall: F. M. Gross, M.S.I.A. Bas-reliefs: Trevor Tennant. Quantity Surveyors: Brown & Spencer. General Contractors: J. Gerrard & Sons Ltd. Sub-contractors: Metal windows and screens, Crittall Manufacturing Co. Ltd.; facing bricks, Himley Brick Co. Ltd.; barrel roofing, Twisteel Reinforcement Ltd.; dome lights, glass bricks and armourplate doors, Pilkington Brothers Ltd.; wood panelling, D. Burkle & Son; heat[ing], Elliott Ellis & Co. Ltd.; lighting, Ch[arles] Richardson & Sons Ltd.; Korkoid fl[oors] Korkoid Ltd.; terrazzo floors, sills [and] wall tiling, Hulme & Potts Ltd.; [steel] entrance doors, Brooks & Co. Ltd.; [joinery] work, W. H. Cadman; sanitary fittings, Shanks Ltd.; strong room door, Chatwood Safe and Engineering Co. Ltd.; stonework, F. M. & H. Nottall Ltd.; radiator grilles, George Wragge & Co.; entrance [screens] railings, George Wragge & [Co.]; [ir]ongery, Laidlaw & Thomson; air conditioning, Textile Air Systems; drive surface, Resmet Sales Ltd.; radiator covers, McArty & Heaton; painting, W. J. Roberts; insulation to barrel roof, Newall's Insulation Co.; artificial stone, Liverpool Artificial Stone Co. Ltd.; roofing, D. Anderson & Sons Ltd.; duct covers, Alexander Lees; paint, Thomas Parsons & Sons Ltd.

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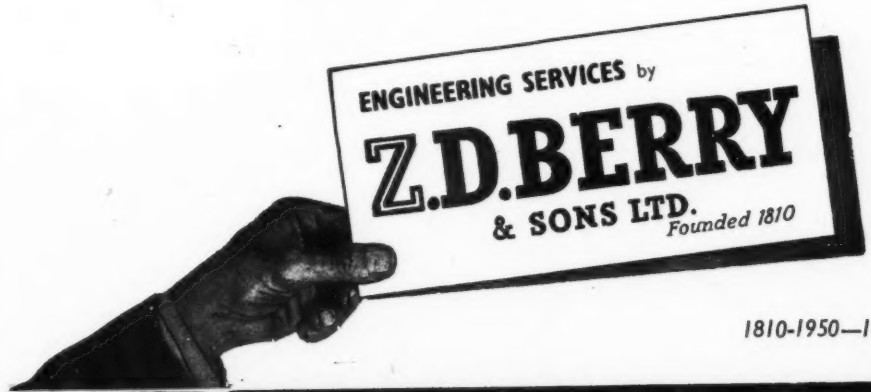


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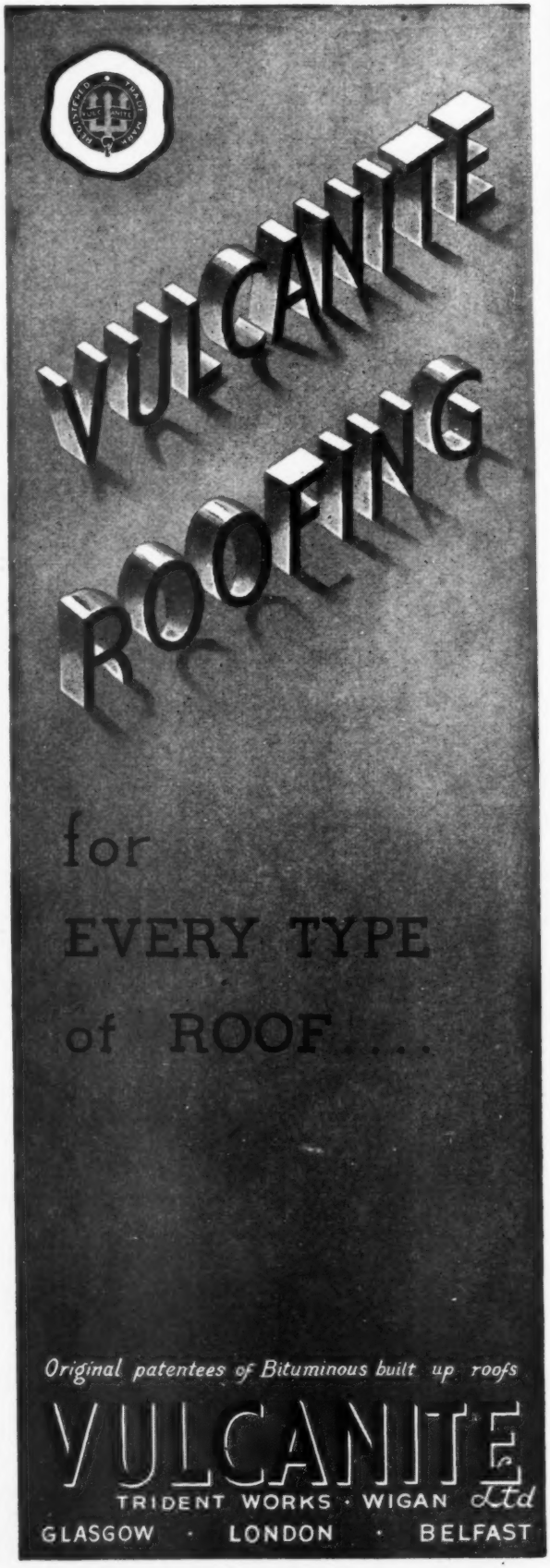


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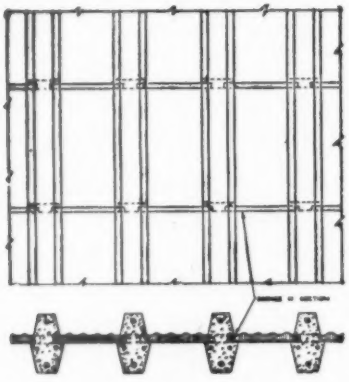
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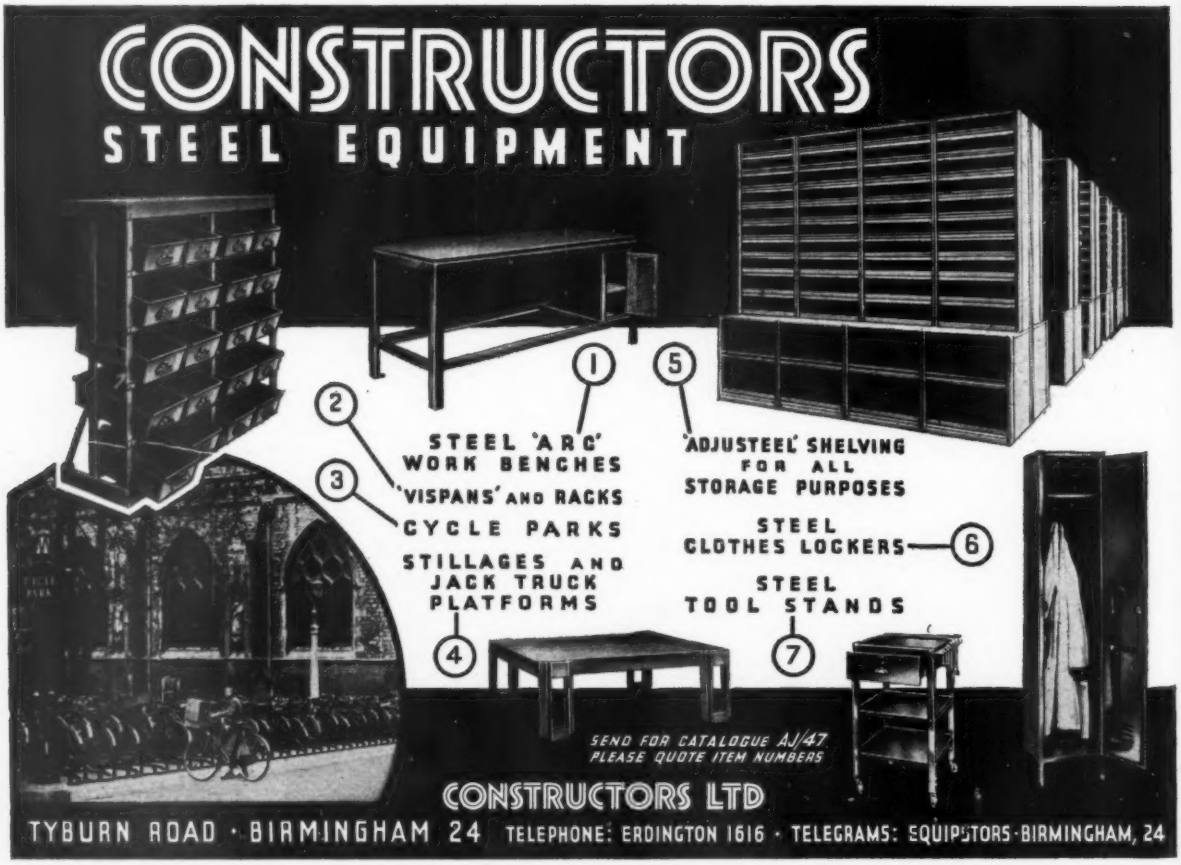


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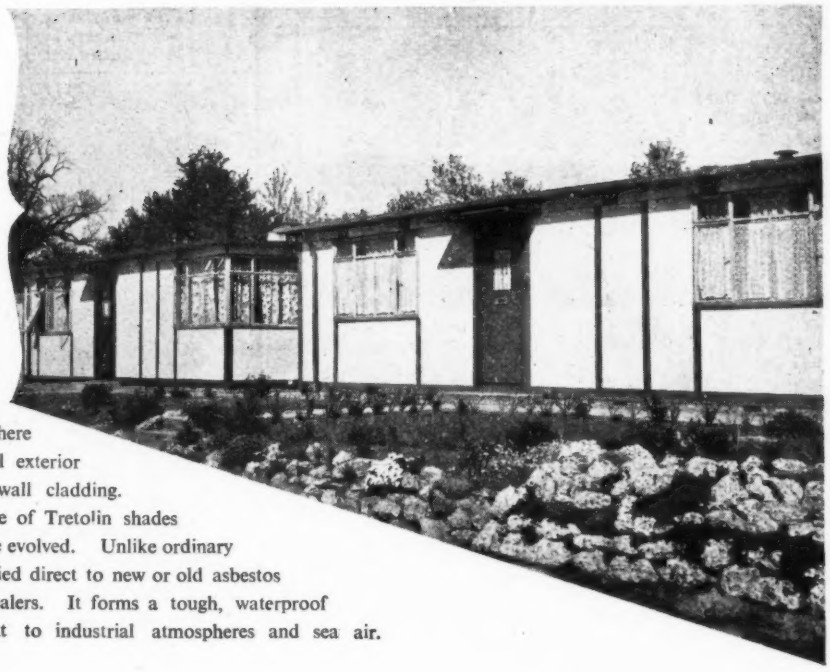
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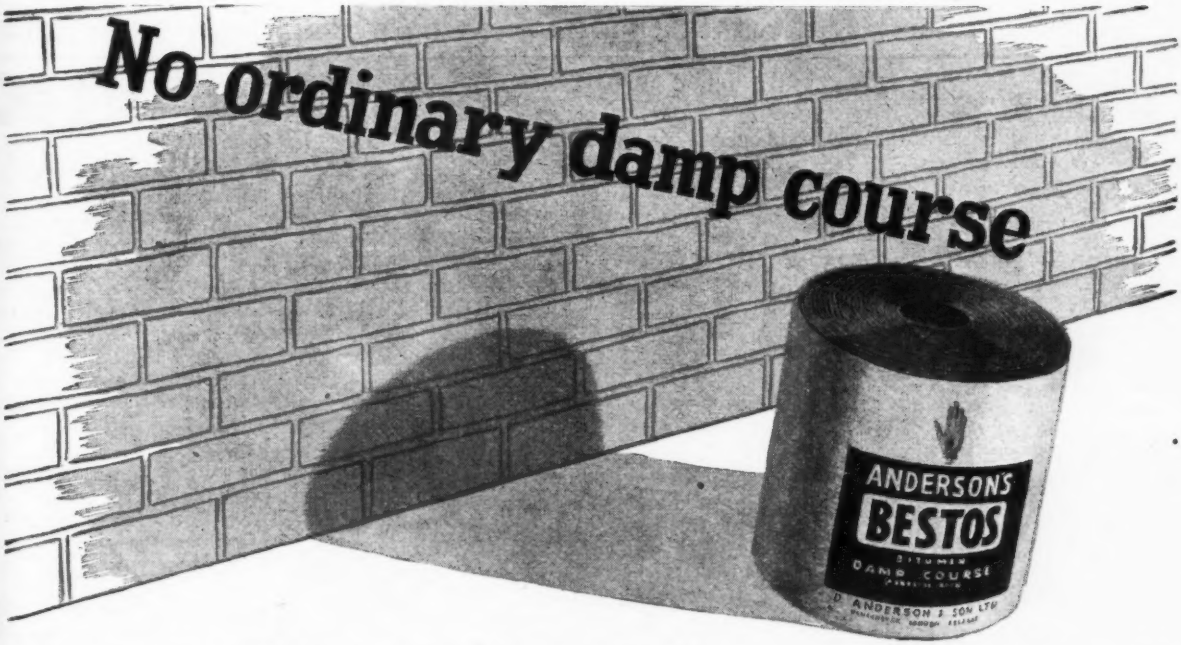
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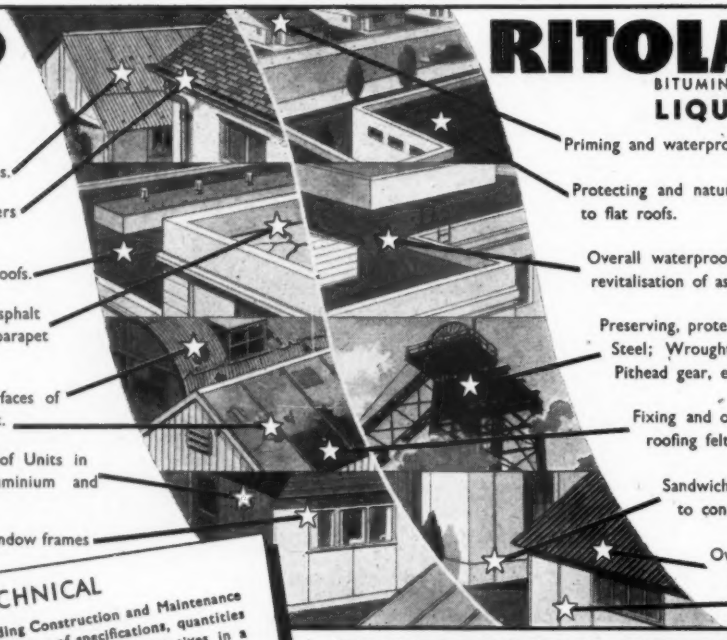
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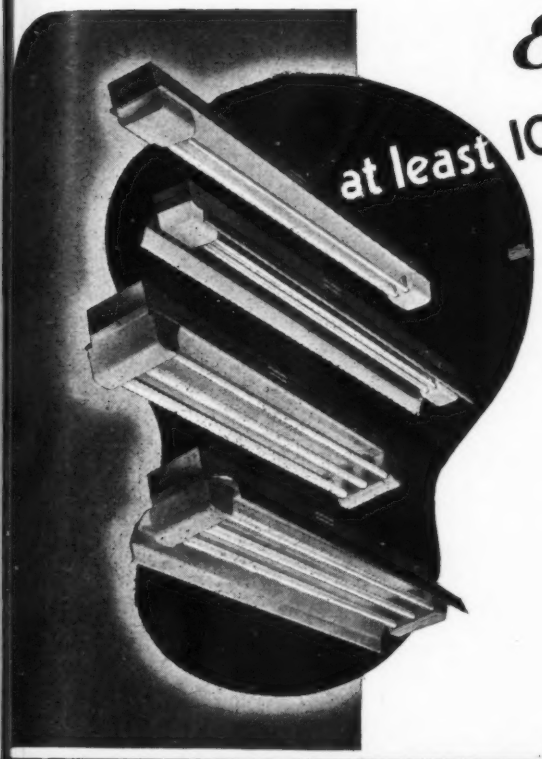
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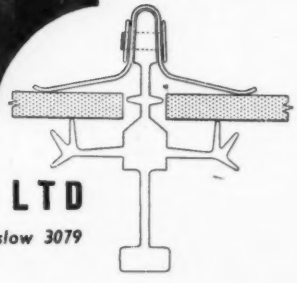
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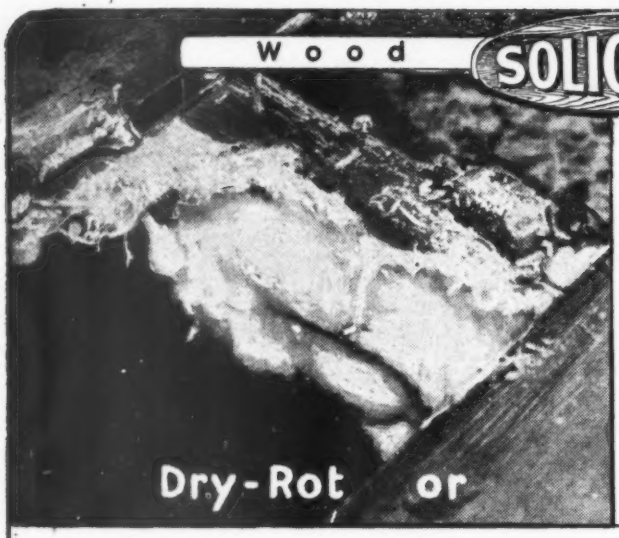


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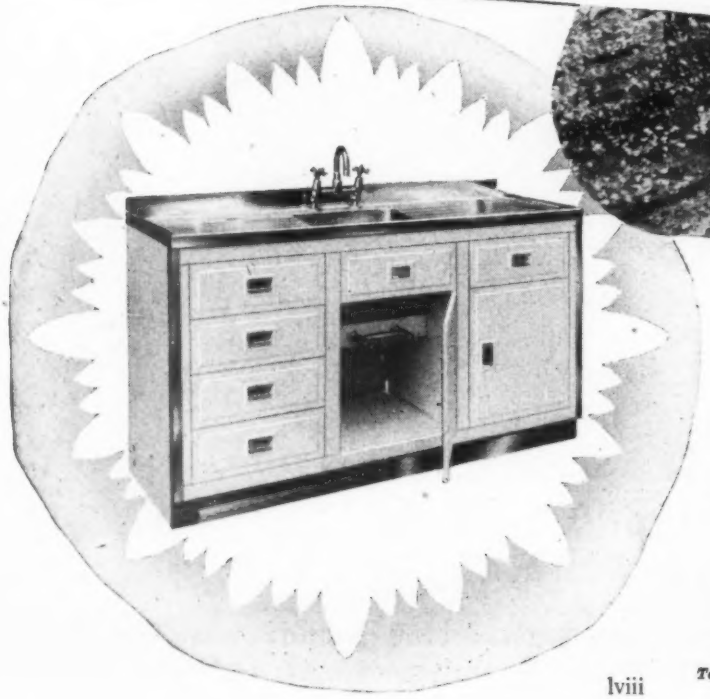
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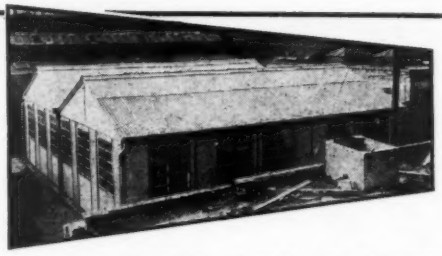
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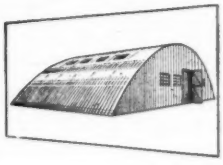
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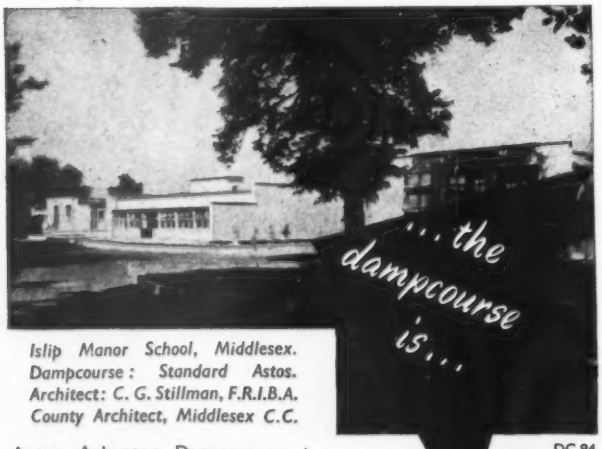
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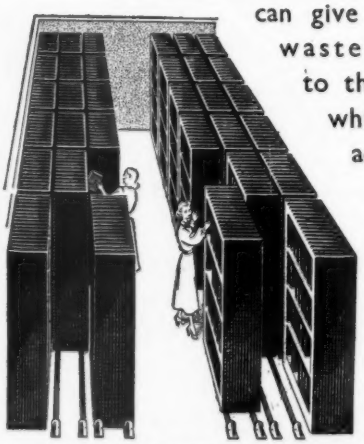
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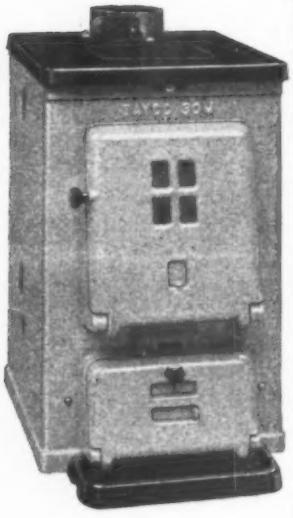
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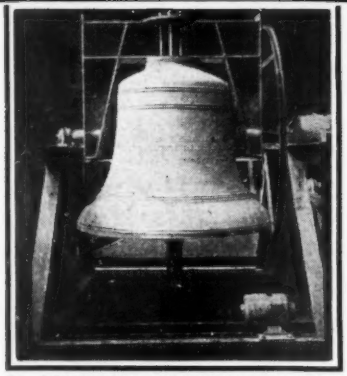
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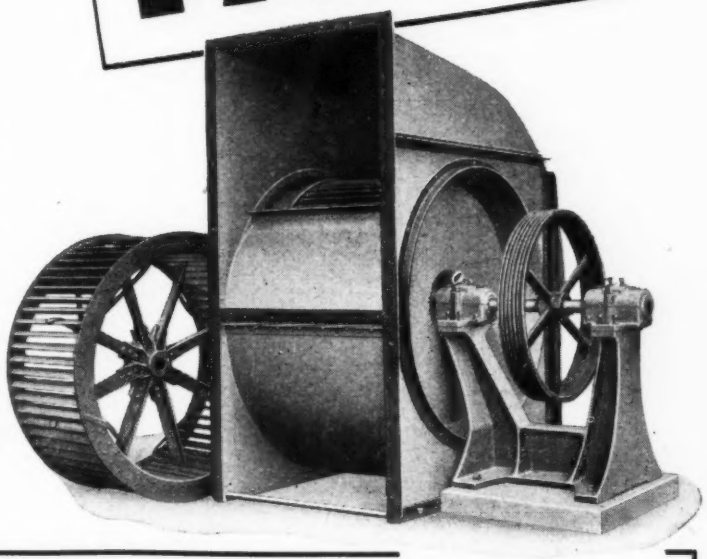
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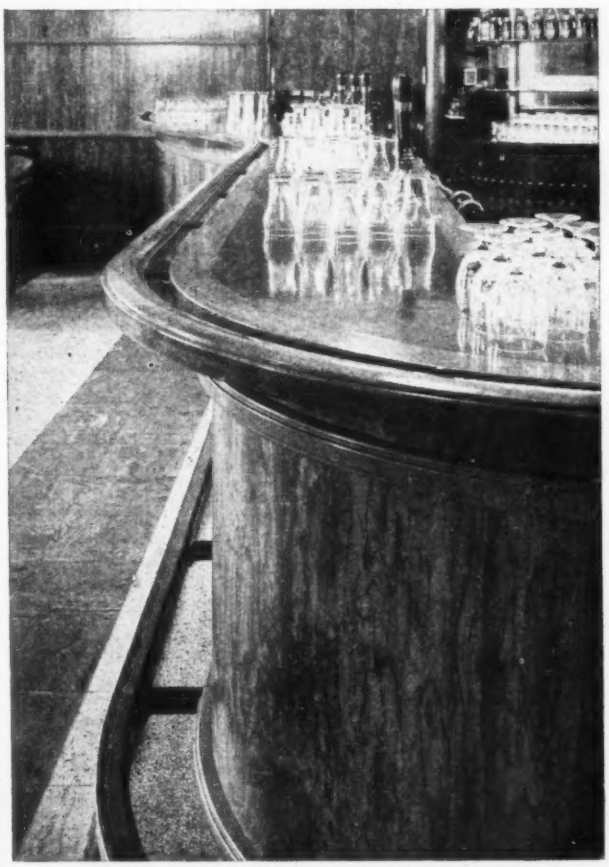


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Salary:—Leading Architectural Assistants: London, £500-£625 per annum; Risley and Capenhurst, £470-£595 per annum.

Hostel accommodation, for men, at reasonable cost is available at Risley, and there is a possibility of housing being available in the near future at Capenhurst.

Apply in writing, stating locality desired, age, training and experience, to Chief Architect, W.G.10/A.N., Ministry of Works, Abell House, John Islip Street, London, S.W.1. 3801

NORTH THAMES GAS BOARD.

Applications are invited for the following appointment in the Architects' Section of the Chief Engineer's Department of Westminster: SENIOR ARCHITECTURAL ASSISTANT, minimum starting salary £650 per annum.

Applicants, who must be Registered Architects and should be studying for or have passed the Final Examination of the R.I.B.A., should be capable of preparing working and detailed drawings and specifications, and supervising and controlling the work on contracts. Experience in design and planning of industrial buildings would be an advantage.

The appointment is of a permanent nature, and pension arrangements will be discussed with short list candidates.

Applications, stating age, qualifications, and particulars of previous appointments held, must be submitted to the Staff Controller, North Thames Gas Board, 30, Kensington Church Street, London, W.8, quoting reference 9787. 4341

BOROUGH OF SWINDON. ARCHITECTURAL STAFF.

Applications are invited for the following appointments in the Department of the Borough Architect and Planning Officer:—

(*a*) ASSISTANT ARCHITECT. A.P.T., Grade V (£520 to £570 per annum).

(*b*) ARCHITECTURAL ASSISTANT. A.P.T., Grade IV (£480 to £525 per annum).

Applicants should have had experience in housing and the general architectural work of a Local Authority.

Applicants for the Grade V post should be Associate Members of the Royal Institute of British Architects, and those for the Grade IV post should have passed the R.I.B.A. Intermediate Examination or its equivalent.

The Council are prepared to assist in providing housing accommodation if required.

The appointments are subject to the provisions of the Local Government Superannuation Act, 1937, and to the passing of a medical examination, and is terminable on one month's notice on either side.

Applications, on forms obtainable from me, must be returned not later than 1st July, 1950.

Canvassing will be a disqualification.

D. MURRAY JOHN,
Town Clerk.

Civic Offices, Swindon, Wilts.
12th June, 1950. 4551

MINISTRY OF WORKS.

There are vacancies in the Chief Architect's Division for ARCHITECTURAL ASSISTANTS, with recognised and fair experience. Successful candidates will be employed in London and elsewhere on a wide variety of Public Buildings, including Atomic Energy and other Research Establishments, Telephone Exchanges, and Housing.

Salary: Architectural Assistants, £300-£525 per annum, plus overtime. Starting pay will be assessed according to age, qualifications and experience. These rates are for London; a small deduction is made in the Provinces.

Although these are not established posts, some of them have long term possibilities, and competitions are held periodically to fill established vacancies.

Apply in writing, stating age, nationality, full details of experience, and locality preferred, to Chief Architect, W.G.10/AT, Ministry of Works, Abell House, London, S.W.1. 4083

PENARTH URBAN DISTRICT COUNCIL. APPOINTMENT OF TEMPORARY QUANTITY SURVEYOR.

Applications are invited for the above appointment at a salary in accordance with Grade A.P.T., V, of the National Scales.

Applicants must be qualified and experienced in taking off and preparing Bills of Quantities, measuring up for and preparation of Interim and Final Accounts for Housing and general Municipal Building work, and preferably having passed the Final Examination of the R.I.C.S. (Quantity Surveying Division).

The appointment is subject to the Provisions of the Local Government Superannuation Act, 1937, and the National Scheme of Conditions of Service, and the successful applicant will be required to pass a medical examination.

Applications, endorsed "Temporary Quantity Surveyor," stating age, present appointment, qualifications and experience, accompanied by copies of three recent testimonials, should be sent to the undersigned not later than the 8th day of July, 1950.

DUDLEY E. MORSE, A.M.I.C.E.,
Engineer and Surveyor.

Council Offices, "West House,"
Stanwell Road, Penarth.
6th June, 1950. 4509

URBAN DISTRICT OF PONTYPOOL. APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited for the post of Architectural Assistant on the staff of the Architect's Department to the above Council, at a salary in accordance with the National Scale, Grade A.P.T., VI, i.e., £595-£660.

Applicants should be Members of the R.I.B.A., and preferably have had experience of Council Housing Estates. A knowledge of Quantities is essential.

Housing accommodation, if necessary, will be provided for the successful applicant.

The post will be subject to the provisions of the Local Government Superannuation Act, 1937, and the National Conditions of Service. The successful applicant will be required to pass a medical examination. The appointment will be subject to one month's notice on either side.

Applications, stating age, past and present appointments, qualifications and experience, accompanied by copies of not more than two recent testimonials, should be delivered to the undersigned not later than Friday, the 30th day of June, 1950. Canvassing will disqualify.

H. COOK,
Clerk of the Council.

Town Hall, Pontypool. 4512

METROPOLITAN BOROUGH OF SHOREDITCH. APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of ONE ARCHITECTURAL ASSISTANT, in Grade A.P. and T., VI, salary £595-£660 per annum, plus London weighting, or in Grade VA, salary £550-£610, plus London weighting, dependent on the qualifications and experience of the applicants.

Applicants should have good architectural experience and be competent to undertake the preparation of working drawings and details for housing schemes, including multi-storey flats.

Preference will be given to Associates of the Royal Institution of British Architects, and the appointment will be subject to medical examination, the Council's Superannuation Scheme, and general conditions of service.

Applications, stating age, training and experience, together with the names of two persons to whom reference may be made, should be submitted to the undersigned not later than Monday, 26th June, 1950, and endorsed "Architectural Assistant."

Any applicant who is related to a member of the Council or the holder of any senior office under the Council must disclose the fact in his application.

C. A. JAMES,
Town Clerk.

Town Hall, Old Street, E.C.1.
May, 1950. 4494

COUNTY BOROUGH OF IPSWICH. APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of Architectural Assistant in the Borough Surveyor's Department.

The appointment is subject to the provisions of the Local Government Superannuation Act, 1937, and to the passing of a medical examination.

The salary will be in accordance with Grades A.P.T., III-V, i.e., £450 p.a., rising by annual increments to £570 p.a., the commencing salary being dependent upon the qualifications and experience of the applicant.

There is no form of application, but candidates must state age, experience, and any other relevant details, and submit the names and addresses of three referees.

Applications must be received by the Borough Surveyor, 19, Tower Street, Ipswich, not later than first post on Monday, the 3rd July, 1950.

Canvassing will disqualify. If the applicant is to his knowledge related to any member or senior officer of the Council he must disclose that fact in writing when submitting his application.

J. G. BARR,
Town Clerk.

Town Hall, Ipswich.
15th June, 1950. 4585

SOUTH-EASTERN REGIONAL HOSPITAL BOARD, SCOTLAND. CHIEF ARCHITECT'S DEPARTMENT.

A vacancy occurs for a PRINCIPAL ASSISTANT ARCHITECT (permanent), salary £686×£25—£760 per annum, headquarters in Edinburgh.

Applicants should have wide experience of the planning, design and construction of large building projects; some experience of hospital work is desirable but not essential.

Applications, giving details of age, qualifications, experience, along with names and addresses of two referees, should be addressed to the Chief Architect, 6, Cambridge Street, Edinburgh, 1, on or before 10th July, 1950. 4537

BOROUGH OF LUTON. BOROUGH ENGINEER'S DEPARTMENT. TECHNICAL STAFF.

Applications are invited for the following appointments:—

(*a*) SENIOR ARCHITECTURAL ASSISTANT (A.P.T., Grade VII, £630×£25—£710 per annum). Housing accommodation will be made available to the successful candidate, if required. Applicants should be A.R.I.B.A. and have extensive Municipal experience, especially in housing and school works.

(*b*) ARCHITECTURAL ASSISTANTS, in salary grades ranging between A.P.T., I (£390-£435), and A.P.T., IV (£480-525), according to qualifications and experience. Applicants must have made some progress in obtaining architectural qualifications, and have had Municipal experience, with particular reference to housing and school works.

The appointments will be subject to the Local Government Superannuation Act, 1937, to the National Scheme of Conditions of Service, and to the successful candidates passing a medical examination.

Applications, appropriately endorsed, giving details of age, qualifications, experience, present appointment and salary, and accompanied by the names of three persons to whom reference may be made, should be sent to the Borough Engineer, Town Hall, Luton, not later than first post on Monday, the 3rd July, 1950. Canvassing will disqualify. Applicants must disclose whether they are related to any member or senior officer or the Council.

W. H. ROBINSON,
Town Clerk.

Town Hall, Luton.
8th June, 1950. 4536

BRITISH ELECTRICITY AUTHORITY. EASTERN DIVISION.

Applications are invited for the following post in the Generation Construction Department at Divisional Headquarters in North London:—

ASSISTANT ARCHITECT.

Applicants should have had experience in the design and alteration of industrial buildings.

The commencing salary will be within the range of £636-£734 per annum, depending upon experience and qualifications.

The salary is provisional and will be subject to negotiation through the medium of the appropriate negotiating body.

The appointment will be Superannuable in accordance with the British Electricity Authority and Area Boards Superannuation Scheme.

Applications, stating age, experience and present position, and endorsed "Assistant Architect," should be submitted to arrive not later than 30th June, 1950, to the Divisional Controller, British Electricity Authority, Eastern Division, Northmet House, Southgate, N.14.

W. N. C. CLINCH,
Controller.

Northmet House, Southgate, N.14. 4514

BRITISH ELECTRICITY AUTHORITY. EAST MIDLANDS DIVISION. DRAUGHTSMEN.

Applications are invited for positions as Draughtsmen, at the Divisional Headquarters, Barker Gate, Nottingham, from persons with experience in one or more of the following branches of work in connection with the construction of Generating Stations:—

(*a*) ELECTRICAL ENGINEERING. General Design, assembly and layouts of H.T. and Auxiliary Switchgear, Transformers, Cables, O.H. Lines and Heavy Plant.

(*b*) MECHANICAL ENGINEERING. General Design, assembly and layouts of modern Boiler and Fuel Handling Plant, Turbo Alternators and Condensing Plant. Circulating Water, Steam and Feed Piping, Foundations, etc.

(*c*) CIVIL ENGINEERING. General Design of Steel and Reinforced Concrete structures, foundations, retaining walls, tunnels, etc.

(*d*) ARCHITECTURAL ASSISTANTS. Applications are invited from men (preferably qualified) with experience in design of architectural work for modern Power Stations, office and welfare buildings.

The salary will provisionally be within the range £450-£550 per annum.

The salary range quoted is to be regarded as provisional until final scales have been negotiated with appropriate organisations, and superannuation will be under terms approved by the British Electricity Authority.

Applications must be submitted on the official form, which may be obtained from the Divisional Establishments Officer, British Electricity House, Barker Gate, Nottingham, and should be returned not later than the 26th June, 1950.

W. S. BURGE,
Divisional Controller.

British Electricity House,
Barker Gate, Nottingham. 4486

BOROUGH OF SOUTHGATE.
BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.
ARCHITECTURAL STAFF.

Applications are invited for the following permanent and superannuated appointments in the Department of the Borough Engineer and Surveyor :—

(*b*) SECOND ARCHITECTURAL ASSISTANT. A.P.T., VA-VI.

(*c*) SENIOR ARCHITECTURAL ASSISTANT. A.P.T., VA-VI.

(*d*) ARCHITECTURAL ASSISTANT. A.P.T., IV-V.

In each case the appropriate "London weighting" will be paid.

For appointments (*b*) and (*c*) preference will be given to applicants who are Associates of the Royal Institute of British Architects, and for appointment (*d*) preference will be given to applicants who are in possession of the Intermediate Examination of that Institute, although applications from persons who are undergoing a regular course of study for the above-mentioned Examination will be considered.

Appointment (*c*) is primarily in connection with the Maintenance of School Buildings, and preference will be given to applicants who have had previous experience of such work.

Forms of application may be obtained from the Borough Engineer and Surveyor, and should be returned to the undersigned not later than 9 a.m. on Monday, 3rd July, 1950.

Canvassing, directly or indirectly, will be a disqualification.

GORDON H. TAYLOR,
Town Clerk.

Town Hall, Palmers Green, N.13.
9th June, 1950. 4534

CITY OF PORTSMOUTH.
CITY ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointments :—

(*a*) PRINCIPAL ASSISTANT ARCHITECTS. Grade VI (£595-£660). Applicants should be Associates R.I.B.A.

(*b*) ARCHITECTURAL ASSISTANTS. Grade III (£450-£495). Applicants should be of Intermediate R.I.B.A. standard, with adequate office experience.

(*c*) ARCHITECTURAL ASSISTANT. Grade I (£390-£435). Applicants should be preparing for the Intermediate Examination of the R.I.B.A.

Applications for (*b*) and (*c*) from students completing courses in July, 1950, at recognised Architectural Schools would be favourably considered.

A special subsistence allowance may be paid to a married applicant for a period of six months after taking up the appointment if he is unable to secure housing accommodation immediately.

Applications, setting out in tabular form, name, age, qualifications, present post and salary, previous posts with dates, details of experience, with names of three referees, must be delivered to the undersigned not later than 10 a.m. on Monday, 3rd July, 1950.

Canvassing will disqualify.

V. BLANCHARD,
Town Clerk.

City Council Chambers,
1, Clarence Parade, Portsmouth.
7th June, 1950. 4549

THURROCK URBAN DISTRICT COUNCIL.
ARCHITECTURAL ASSISTANT, GRADE VI.

Applications are invited for the appointment of an Architectural Assistant, at a salary in accordance with Grade VI of the A.P.T. Division of the National Scale of Salaries, *i.e.*, £595 per annum, rising by three annual increments to £660 per annum.

Candidates should be Associates of the Royal Institute of British Architects, and should be experienced in the preparation of drawings, specifications and estimates for building and architectural work, undertaken by a Local Authority, particularly in connection with housing schemes on a large scale.

Housing accommodation, if necessary, will be provided for the successful candidate if he lives more than 20 miles from the district.

The appointment is subject to the provisions of the Local Government Superannuation Act, 1937, and the successful applicant will be required to pass a medical examination.

Applications, endorsed "Architectural Assistant, VI," stating age, qualifications and experience, and quoting three references, should reach the undersigned not later than the first post on Tuesday, the 4th July, 1950.

Canvassing will disqualify, and applicants must disclose in writing any relationship to any member or senior officer of the Council.

A. E. POOLE.
Clerk of the Council.

Council Offices, Whitehall Lane, Grays.
9th June, 1950. 4548

CITY OF LINCOLN.
CITY ARCHITECT'S DEPARTMENT.

Applications are invited for the appointment of a SENIOR ARCHITECTURAL ASSISTANT, Grade A.P.T., VI (£595-£660), on the established superannuated staff.

Living accommodation will be made available if required by the successful candidate.

Applications, stating age, experience, and the names of two referees, should be delivered to P. F. Burridge, F.R.I.B.A., City Architect, Stamp End, Lincoln, within 14 days of the appearance of this advertisement.

J. H. SMITH,
Town Clerk.

Town Clerk's Office, Lincoln.
June, 1950. 4513

EAST RIDING OF YORKSHIRE COUNTY COUNCIL.
COUNTY PLANNING DEPARTMENT.

Applications are invited for the undermentioned appointments :—

(*a*) SENIOR PLANNING ASSISTANT. A.P.T., Grades V and VI. Salary scale £520-£660. The commencing salary will be fixed according to experience and qualifications. Candidates must be Associate Members of the Town Planning Institute, preferably with architectural experience, or Associates of the Royal Institute of British Architects. The Officer will be required to provide a car, and travelling allowance will be paid in accordance with the scale adopted by the County Council.

(*b*) PLANNING ASSISTANT. A.P.T., Grades I, II, III and IV. The grade will be fixed according to qualifications and experience. Candidates should preferably have passed the Intermediate Examination of the Town Planning Institute or have an equivalent engineering, architectural or surveying qualification, and have had some practical experience. Applications will also be considered from graduates with limited experience on the following basis :—

Less than one year's experience, A.P.T., I (£390-£435).

More than one but less than two years, A.P.T., II (£420-£465).

More than two years, A.P.T., IV (£480-£525).

The appointments will be to the permanent staff and are subject to the National Joint Council's conditions of service as adopted by the County Council. The appointments will be terminable by one month's notice on either side, and will be subject to the Local Government Superannuation Act, 1937. Selected candidates will be required to pass a medical examination to the satisfaction of the County Medical Officer of Health. Applications, stating age, qualifications and experience, should be received by the undersigned not later than the 1st July, 1950, and should be accompanied by copies of two recent testimonials. Canvassing, either directly or indirectly, will be a disqualification, and relationship to any member or senior officer of the Council must be disclosed.

T. STEPHENSON,
Clerk of the Council.

County Hall, Beverley. 4559

BOROUGH OF COLCHESTER.
APPOINTMENT OF TEMPORARY ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of an Architectural Assistant in the Borough Engineer's Department, at a salary in accordance with the recommendations of the National Joint Council for Local Authorities Administrative, etc., Services (A.P.T., Grade II, £420-£465 per annum).

Applicants should have passed the Intermediate Examination of the R.I.B.A. or its equivalent, and experience with Local Authority's Housing Schemes will be an advantage.

The appointment will be terminable by one month's notice on either side.

Applications, stating age, qualifications and experience, accompanied by copies of not more than two recent testimonials, must reach the Borough Engineer, 64, West Stockwell Street, Colchester, not later than Monday, 3rd July, 1950.

Canvassing will disqualify, and candidates must state whether they are related to any member or senior officer of the Council.

N. CATCHPOLE.
Town Clerk.

Town Hall, Colchester.
14th June, 1950. 4553

ESSEX EDUCATION COMMITTEE.
MID-ESSEX TECHNICAL COLLEGE AND SCHOOL OF ART, MARKET ROAD, CHELMSFORD.

Full-time LECTURER IN ARCHITECTURE required, to assist in the instruction of full-time Day and Evening Students preparing for the Inter. and Final Examinations of the R.I.B.A. Salary in accordance with the Assistants' Scale of the Burnham Further Education Report, £300×£15—£555 per annum (allowance being made for approved professional and teaching experience and war service), plus graduate and training allowances.

Further particulars obtainable (stamped addressed foolscap envelope), from the Clerk to the Governors, at the College, and returnable to him as soon as possible.

D. N. BUNGEY,
Acting Chief Education Officer.
4547

NORTH-EAST METROPOLITAN REGIONAL HOSPITAL BOARD.

Applications are invited for the following appointment on the Board's Headquarters staff :—

ASSISTANT QUANTITY SURVEYOR. Grade A.P.T., VIII. Salary scale £685×£25—£760, plus London weighting. The appointment is subject to medical examination and the National Health Service (Superannuation) Regulations. Candidates should give full details of qualifications and experience, which must include "taking off," "abstracting," preparation of bills of quantities, specifications, detailed estimates, valuation for interim certificates, and measurement for and preparation of final accounts.

Applications, showing also name, age, present position and salary, together with the names of three referees, should reach C. E. Nicol, Secretary, 11a, Portland Place, London, W.1, not later than 14 days after publication of this advertisement. Canvassing disqualifies. 4570

COUNTY BOROUGH OF MERTHYR TYDFIL.
BOROUGH ENGINEER, SURVEYOR AND ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointments in the above Department :—

(*a*) SENIOR ARCHITECTURAL ASSISTANT. Grade A.P.T., VI (£595-£660 p.a.).

(*b*) SENIOR ENGINEERING ASSISTANT. Grade A.P.T., VI (£595-£660 p.a.).

Candidates for (*a*) must have had considerable experience in the design and construction of houses, clinics, public buildings and general architectural work, in the preparation of specifications, bills of quantities and estimates in connection therewith. Applicants must be Associate Members of the Royal Institute of British Architects.

Candidates for (*b*) must be Associate Members of the I.Mun.E. or have equivalent qualifications and have had good Municipal engineering experience. Preference will be given to applicants who have had Private Street Works experience.

The appointments will be subject to :—

(1) Scheme of Conditions of Service of the National Joint Council.

(2) Provisions of the Local Government Superannuation Act, 1937.

(3) The passing of a satisfactory medical examination.

(4) One month's written notice on either side.

Applications, stating age, qualifications and experience, together with copies of three recent testimonials, should be delivered to the undersigned not later than Friday, the 14th July, 1950.

Canvassing in any form will be deemed a disqualification.

T. S. EVANS,
Town Clerk.

12th June, 1950. 4550

THE UNIVERSITY OF LIVERPOOL.

Applications are invited for the post of LECTURER AND STUDIO INSTRUCTOR in the School of Architecture, at a salary scale of £550×£50—£1,100 per annum.

Applications, accompanied if possible by drawings or photographs of work, two testimonials, and the names of two referees, should be received not later than 11th September, 1950, by the undersigned, from whom further particulars of the conditions of appointment may be obtained.

STANLEY DUMBELL,
Registrar.

May, 1950. 4564

FLINTSHIRE COUNTY COUNCIL.
COUNTY PLANNING DEPARTMENT.

Applications are invited for the following appointments in the County Planning Department :—

(*a*) PLANNING ASSISTANT. Salary £480 per annum, rising to £525 per annum. (Grade A.P.T., IV.)

(*b*) ARTIST/DRAUGHTSMAN. Salary £390 per annum, rising to £435 per annum. (Grade A.P.T., I.)

Applicants for (*a*) must have had good experience in Town and Country Planning, and should have passed at least the Intermediate Examination of the Town Planning Institute.

Applicants for (*b*) must be expert free hand draughtsmen and colourists, with good experience in perspective work and architectural drawing and lettering.

The possession of a motor car would be an advantage in connection with appointment (*a*). Appropriate mileage allowances will be paid in accordance with the National Joint Council's Scales.

The appointments will be subject to (*a*) the National Scheme of Conditions of Service, as modified by the County Council; (*b*) the provisions of the Local Government Superannuation Act, 1937, and (*c*) a satisfactory medical examination.

Applications will be considered from registered disabled persons.

Applications, on a form to be obtained from the undersigned, together with the names and addresses of three persons to whom direct reference can be made, are to be submitted to me not later than the 10th July, 1950.

W. HUGH JONES,
Clerk of the County Council.

County Buildings, Mold.
June, 1950. 4592

NORTHERN IRELAND HOUSING TRUST.

Applications are invited for the following posts :—

ASSISTANT ARCHITECTS. Salary scale, £700×£25—£900.

ASSISTANT ARCHITECTS. Salary scale, £500×£25—£750.

QUANTITY SURVEYORS. Salary scale, £700×£25—£900.

ASSISTANT QUANTITY SURVEYORS. Salary scale, £500×£25—£750.

Applicants must be fully qualified and experienced.

The persons appointed will be required to participate in a Superannuation Scheme, having reciprocity with certain Government and Local Government Superannuation Schemes in Great Britain.

Assistance in obtaining housing accommodation may be given.

Preference will be given to ex-Service candidates.

Forms of application, which must be completed and returned not later than the 18th July, may be obtained from the General Manager, Northern Ireland Housing Trust, 5, Donegall Square South, Belfast.

12th June, 1950. 4572

COUNTY BOROUGH OF DEWSBURY.
BOROUGH ARCHITECT AND BUILDINGS SURVEYOR'S DEPARTMENT.

Applications are invited for the following appointments in the Borough Architect and Buildings Surveyor's Department:—

(a) QUANTITY SURVEYOR. Grade A.P.T., VI. Salary £595-£660 per annum.

(b) QUANTITY SURVEYOR. Grade A.P.T., V. Salary £520-£570 per annum.

(c) ARCHITECTURAL ASSISTANT. Grade A.P.T., IV. Salary £480-£525 per annum.

(d) TEMPORARY CLERK OF WORKS for a period of approximately 3 years in connection with the erection of a Four Form Entry Secondary Modern School. Salary £9 9s. per week.

The appointments will be subject to one month's notice on either side and to the provisions of the Local Government Superannuation Act, 1937. The successful candidates will be required to pass a medical examination.

Applications, stating age, qualification and full particulars of training and experience, together with copies of two recent testimonials, should be sent to the undersigned not later than Monday, 3rd July, 1950, in envelopes suitably endorsed.

A. NORMAN JAMES,
Town Clerk.

Town Hall, Dewsbury.
13th June, 1950. 4565

CITY AND COUNTY OF THE CITY OF EXETER.

Applications are invited for the appointments of ASSISTANT QUANTITY SURVEYORS on the Permanent Staff of the City Architect's Department. The salary will be in accordance with A.P.T., Grade VI (£595 to £660 per annum). Applicants must be thoroughly experienced in the preparation of Bills of Quantities, Interim Valuations and Final Accounts.

The appointments will be subject to one month's notice on either side, and to the provisions of the Local Government Superannuation Act, 1937. Successful applicants will be required to pass a medical examination.

Canvassing will disqualify, and candidates must disclose whether, to their knowledge, they are related to any member of the Council or to the holder of any senior office under the Council.

Applications, stating age, qualifications, previous and present appointments and salaries, full details of experience, and the earliest possible date when available, together with copies of recent testimonials, should be sent to H. B. Rowe, F.R.I.B.A., A.M.I.Struct.E., City Architect, 2, Southernhay West, Exeter, not later than the 7th July, 1950.

C. J. NEWMAN,
Town Clerk.

Exeter.
June, 1950. 4583

GOVERNMENT OF NORTHERN IRELAND.
MINISTRY OF FINANCE.
CHIEF ARCHITECT'S BRANCH.
ARCHITECTURAL ASSISTANTS.

Applications are invited for posts of Architectural Assistant in the Ministry of Finance. Appointments will be non-pensionable, but successful candidates will be eligible for consideration for appointment to pensionable posts as vacancies arise. Rates of pay will be fixed in accordance with the experience and qualification of the successful candidates and will be within the range £400-£540.

Qualifications: Candidates must have passed the Intermediate Examination of the Royal Institute of British Architects and have had at least two years' experience in an Architect's Drawing Office.

Preference will be given to candidates who have served with H.M. Forces in war-time, provided the Ministry is satisfied that such candidates can, or within a reasonable time will be able to, discharge the duties efficiently.

Applications, giving date of birth, full details of training and qualifications, should be sent immediately to the Director of Establishments, Ministry of Finance, Stormont. 4582

LONDON COUNTY COUNCIL.
ARCHITECT'S DEPARTMENT.

Architect to the Council: ROBERT H. MATTHEW.
Deputy Architect: J. L. MARTIN.

APPOINTMENT OF SCHOOLS' ARCHITECT AND ASSISTANT SCHOOLS' ARCHITECT.

Applications are invited for the following positions in the Architect's Department:—

(1) SCHOOLS' ARCHITECT. £1,500×£100—£1,700.

The Schools' Architect will be responsible to the Architect to the Council for the organisation and direction of the Schools division dealing with the design and erection of educational buildings of all types. The position calls for experience in contemporary architectural design and modern methods of construction and standardisation, qualities of leadership and organising ability of a high order.

(2) ASSISTANT SCHOOLS' ARCHITECT. £1,250×£75—£1,550.

To assist the Schools' Architect mainly in the sphere of design.

Candidates may be appointed at any point on the scale, according to their qualifications and experience. No age limits. Experience of public architecture not essential. It is unnecessary for candidates who applied in response to a previous advertisement to apply again.

Form of application available from the Architect to the Council (AR/EK/SA), County Hall, S.E.1, enclosing stamped addressed foolscap envelope. Application forms to be returned not later than 13th July, 1950.

Canvassing disqualifies. (831) 4586

SOUTHERN COLLEGE OF ART, PORTSMOUTH.

Principal: W. J. L. GAYDON, A.R.C.A.
Head of School of Architecture: A. C. TOWNSEND, Dipl.Arch.(L'pool), F.R.I.B.A.

Required in September, 1950, a Part-time LECTURER, to teach Architectural Design to the standard of the R.I.B.A. Intermediate Examination.

Particulars, salary and other details of appointment, obtainable on application to the Registrar, College of Art, Guildhall Square, Portsmouth.

B. G. BARNARD, M.A.,
Chief Education Officer.

4546

HAMPSHIRE COUNTY COUNCIL.

Applications are invited for the following appointments on the established staff of the County Architect's Department:—

(a) SENIOR ASSISTANT ARCHITECT. Grade VI (£595-£660).

(b) ASSISTANT QUANTITY SURVEYOR. Grade V (£520-£570).

Candidates for appointment (a) must be Registered Architects, preferably A.R.I.B.A., with at least 5 years' experience and with good general experience in the design and construction of public buildings.

Candidates for appointment (b) should be Members of the R.I.C.S., with at least 5 years' experience, and should have had good experience in the preparation of estimates and Bills of Quantities for all types of buildings, and in the settlement of final accounts and building contracts.

The appointments are pensionable and will be subject to satisfactory medical reports.

The appointments will be terminable by 3 months' notice on either side.

Applications should be made on forms to be obtained from the County Architect, The Castle, Winchester, to whom they should be returned not later than the 8th July, 1950.

G. A. WHEATLEY,
Clerk of the County Council.

The Castle, Winchester.
13th June, 1950. 4581

CRAWLEY DEVELOPMENT CORPORATION invites applications from fully qualified Architects for the posts of (a) ARCHITECT, Grade III, £750×£50—£1,000 p.a., and (b) ASSISTANT ARCHITECT, Grade IV, £550×£30—£750 p.a.

The commencing salaries within the scales will be determined by qualifications, age, and experience of the applicants.

For appointment (a) applicants should have had first-class experience in design of housing, industrial buildings, and public buildings.

For appointment (b) applicants should have a good general architectural experience in design and planning.

In both appointments a knowledge of town planning is desirable but not essential.

Contributory superannuation.

Forms of application and further particulars should be obtained from the Chief Architect, A. G. Sheppard Fidler, M.A., B.Arch., F.R.I.B.A., A.M.T.P.I., Broadfield, Crawley, Sussex, to whom the completed application must be returned not later than 4th July, 1950.

C. A. C. TURNER,
Chief Executive.

4552

DERBYSHIRE COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the undermentioned appointments on the permanent staff:—

Conditions of service and salaries are in accordance with the National Joint Council Scheme for Local Authorities, as adopted by the County Council.

(a) SENIOR ASSISTANT ARCHITECTS. Grade VIII, £685×£25 to £760 per annum.

Applicants must be fully qualified by examination and be experienced in work connected with County buildings and in particular new Schools.

(b) ASSISTANT ARCHITECTS. Grade V, £520×£15 (2) and £20 (1) to £570 per annum.

Applicants must have had a good general architectural experience, preferably on Education buildings, and have passed the Intermediate Examination of the Royal Institute of British Architects, or its equivalent, at one of the recognised Schools of Architecture, and it is desirable that they should be registered architects under the Architects' Registration Council.

The appointments will be terminable by one month's notice on either side, and subject to the provisions of the Local Government Superannuation Acts, and the successful candidates will be required to pass a medical examination.

Canvassing members of the Council, directly or indirectly, will be a disqualification for appointment.

The County Council is not in a position to assist successful applicants with housing accommodation.

Applications to be made on a form to be obtained from the undersigned, to whom it must be returned, accompanied by copies of three recent testimonials not later than 3rd July, 1950.

Envelopes and applications must be endorsed stating clearly the vacancy for which the application is made.

F. HAMER CROSSLEY, Dipl.Arch(L'pool), F.R.I.B.A.,
County Architect.

St. Mary's Gate, Derby.
13th June, 1950. 4567

BOROUGH OF ST. MARYLEBONE.

Applications are invited for the appointment of SENIOR ARCHITECTURAL ASSISTANT on the permanent staff of the Housing Department, at a salary in accordance with Grade A.P.T., VA (£550, rising to £610 per annum), plus London "weighting."

Applicants should not be more than 40 years of age, should hold or have made substantial progress towards professional qualification in the Royal Institute of British Architects, and should have had good experience in the design of Municipal housing.

The appointment, terminable by one month's notice on either side, will be subject to satisfactory medical examination by the Council's Medical Officer; to proof of age by production of birth certificate; to the National Scheme of Conditions of Service as adopted by the Council; and to compliance with the provisions of the St. Marylebone Borough Council (Superannuation) Acts, 1908-1936, and any modifications thereof.

Forms of application are not issued, but candidates must write stating age, qualifications, present position and salary, particulars of past appointments, and all other essential information, and giving the names of three referees.

Applications must be received by the Town Clerk, Town Hall, St. Marylebone, W.1, not later than Tuesday, the 4th July, 1950.

Canvassing will disqualify.

June, 1950. 4574

SPALDING RURAL DISTRICT COUNCIL.
ARCHITECT'S DEPARTMENT.

Applications are invited for the full-time appointment of TECHNICAL ASSISTANT in A.P.T. Division, Grade V, of the National Scale (commencing at £520 and rising to £570 per annum). The successful applicant will work under the direction of the Council's Architect, and his main duties will be to prepare Bills of Quantities, Estimates, Valuations, and settlement of accounts in connection with the Council's housing schemes. Applicants should have a sound and practical knowledge of architectural and quantity surveying work.

The appointment will be subject to the Local Government Superannuation Act, 1937, and to a satisfactory medical examination.

Applications, stating age, qualifications and experience, together with the names and addresses of three persons to whom reference may be made, to be sent at the earliest possible date to the Clerk to the Council, Rural Council Offices, 10, The Crescent, Spalding, Lincs.

A candidate who is related to a member or official of the Council must disclose the fact in his application. Canvassing will disqualify.

The Council are prepared to let a house in the rural district to the successful applicant. 4573

RURAL DISTRICT COUNCIL OF NEW FOREST.

QUANTITY SURVEYOR, GRADE VII.

Applications are invited for a Quantity Surveyor, A.P.T., Grade VII, who should have experience in taking off, abstracting, billing, measuring up, and settling final accounts, and preference will be given to an Associate R.I.C.S. (Quantities).

The applicant should have had at least 5 years' practical experience with a Local Authority or practising Quantity Surveyor.

The appointment will be subject to the provisions of the Local Government Superannuation Act, 1937, and will be terminated by one month's notice on either side.

The Council will be prepared to consider applications for housing accommodation from married candidates.

Applications, stating age, qualifications, experience, present appointment and salary, together with the names of three persons to whom reference may be made, are to be delivered to the undersigned not later than the 3rd July, 1950.

L. C. ADAMS,
Engineer and Surveyor.

Council Offices, Lyndhurst, Hants. 4563

BOROUGH OF RADCLIFFE.
BOROUGH ENGINEER'S DEPARTMENT.
APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited for the above-mentioned permanent appointment in the Office of the Borough Engineer and Surveyor, at a salary within the range of Grades III, IV and V of the National Scale of Salaries, according to experience.

The person appointed must be experienced in the preparation of plans, specifications, etc., for Housing, Public Buildings, and general Municipal work in the Borough, and must have a thorough knowledge of present day building.

The appointment will be subject to the provisions of the Local Government Superannuation Act, 1937, and the successful applicant will be required to pass a medical examination.

The Council may be able to assist in the matter of housing accommodation.

Applications, stating age, qualifications and experience, together with copies of not more than three recent testimonials, and endorsed "Architectural Assistant," must be received by the undersigned not later than Friday, the 30th June, 1950.

Canvassing will disqualify.

H. A. FOX,
Town Clerk.

Town Hall, Radcliffe.
9th June, 1950. 4541

COUNTY BOROUGH OF NEWPORT.
PLANNING ASSISTANT. Salary A.P. and T., Grade IV, £480-£525 p.a. Applicants must have had experience in the control of development and the general routine of a Planning Department. Details of duties and forms of applications to be obtained from me, must be received by the 13th July, 1950.

H. F. ALSTON,
Borough Planning Officer.
Corn Exchange Chambers, Thomas Street, Newport, Mon. 4566

ARCHITECT, with Colonial experience, required for Nigeria. Initial tour 18 months. Salary according to age and experience. Write, giving age, qualifications and experience, to Personnel Manager, 19, Curzon Street, W.1, quoting Serial No. 44B, by 29th June, 1950. 4562

LONDON COUNTY COUNCIL.
Applications are invited for positions of ARCHITECTURAL ASSISTANT (salaries up to £580 a year) in the Housing and Valuation Department. Commencing salaries will be determined according to qualifications and experience. Engagement will be subject to the Local Government Superannuation Acts, and successful candidates will be eligible for consideration for appointment to the permanent staff on the occurrence of vacancies.

Successful candidates will be required to assist in the design, layout and preparation of working drawings for housing schemes (cottages and multi-storey flats), and will be employed in the Housing Architect's Division.

Forms of application may be obtained from the Director of Housing, The County Hall, Westminster Bridge, S.E.1 (stamped addressed envelope required and quote reference A.A.1). Canvassing disqualifies. (816) 4558

BUCKS COUNTY COUNCIL.
The County Architect invites applications from qualified ASSISTANT ARCHITECTS who possess a keen and energetic enthusiasm for their profession. Candidates should preferably have been trained at a recognised School of Architecture. Salary Grade VI, £595-£660 p.a.; Grade V, £520-£570.

Further particulars and form of application may be obtained from the County Architect, County Offices, Aylesbury, to whom they must be delivered by 30th June, 1950. 4571

CITY OF STOKE-ON-TRENT.
CITY ARCHITECT'S DEPARTMENT.
Applications are invited from suitably qualified persons for the following appointments to the permanent staff:—

(*a*) SENIOR ASSISTANT ARCHITECTS. Salary A.P.T. Division, Grade VII, £635-£710.

(*b*) ASSISTANT ARCHITECTS. Salary A.P.T. Division, Grade VI, £595-£660.

(*c*) ARCHITECTURAL ASSISTANTS. Salary A.P.T. Division, Grade III, £450-£495.

The selected applicants will be required to pass a medical examination, and the appointments will be subject to the provisions of the Local Government Superannuation Act, 1937.

Previous experience of Local Government work is not essential.

Suitable housing accommodation can be made available to the successful candidates for appointments (*a*) and (*b*).

Applications, giving date of birth, particulars of training, experience, etc., with copies of two recent testimonials, should be received by J. R. Piggott, F.R.I.B.A., City Architect, Kingsway, Stoke-on-Trent, endorsed with the title of the appointment applied for, not later than Tuesday, 4th July, 1950.

HARRY TAYLOR,
Town Clerk.
Town Hall, Stoke-on-Trent.
15th June, 1950. 4596

BOROUGH OF MALDEN AND COOMBE.
BOROUGH ENGINEER'S DEPARTMENT.
APPOINTMENT OF SENIOR ARCHITECTURAL ASSISTANT (GRADE A.P.T., Va).

Applications are invited for the above-mentioned permanent appointment, at a salary in accordance with Grade Va of the Administrative, Professional and Technical Division of the National Scales for Local Government Officers, namely, £550 × £20—£610 per annum, plus "London weighting." The appointment will be subject to the National Scheme of Conditions of Service, terminable by one month's notice on either side, and subject to the provisions of the Local Government Superannuation Act, 1937. The successful candidate will be required to pass a medical examination.

Preference will be given to registered architects who have had experience in the architectural design and construction of general Municipal work, including flat development.

Applications, giving details of age, experience, qualifications, present and past appointments, and enclosing copies of two recent testimonials, should be addressed to reach the undersigned not later than 7th July, 1950.

Canvassing, directly or indirectly, will be deemed a disqualification, and candidates must disclose in their applications whether to their knowledge they are related to any member or senior official of the Council.

The Council will endeavour to provide the successful candidate with housing accommodation if deemed necessary.

HAROLD E. BARRETT,
Town Clerk.
Municipal Offices, New Malden, Surrey.
June, 1950 4595

MIDDLESEX COUNTY COUNCIL COUNTY PLANNING DEPARTMENT.

(*a*) THREE PLANNING ASSISTANTS (A.P.T., IV, £480, rising to £525, plus £20-£30 London weighting, according to age). Should have town planning experience and have passed the Intermediate examination of the T.P.I., but other appropriate examinations or qualifications considered.

(*b*) ONE DRAUGHTSMAN (A.P.T., I, £390, rising to £435, plus £20-£30 London weighting, according to age). Should be good draughtsman, preferably with experience of map drawing and/or architectural draughtsmanship.

Established, pensionable, subject to medical examination and prescribed conditions. Applications, stating age, experience, two recent testimonials, to the undersigned by 15th July (quoting H.113 A.J.). Canvassing disqualifies.

C. W. RADCLIFFE,
Clerk of the County Council.
Middlesex Guildhall, S.W.1. 4594

EAST RIDING OF YORKSHIRE COUNTY COUNCIL.

Applications are invited for the following appointments on the permanent staff of the County Architect's Department:—

(*a*) CHIEF QUANTITY SURVEYOR. Salary (A.P.T., Grade VIII), £685-£760 per annum.

Applicants should be Members of the Royal Institute of Chartered Surveyors, and have a wide experience in the preparation of estimates; specifications; Bills of Quantities; schedules; adjustment of final accounts and other work incidental to such an appointment.

(*b*) ASSISTANT BUILDING SURVEYOR. Salary (A.P.T., Grade V), £520-£570 per annum.

Candidates should possess appropriate qualifications and experience of all branches of building. They should be capable of preparing specifications; schedules; reports and estimates for maintenance and other improvement works; the surveying of sites and existing structures in connection with improvements and adaptations, etc., and the measurement and progressing of work of all trades.

(*c*) QUANTITY SURVEYOR'S ASSISTANT. Salary (A.P.T., Grade III), £450-£495 per annum.

Candidates should have passed the Intermediate Examination of the Royal Institute of Chartered Surveyors.

In the cases of (*a*) and (*b*) the successful candidates will be required to provide a motor car, in respect of which a mileage allowance will be paid in accordance with the Council's scale.

The appointments, which are terminable by one month's notice on either side, are subject to the provisions of the Local Government Superannuation Act, 1937, and the successful candidates will be required to pass a medical examination.

Applications, stating age, training, qualifications and experience, with particulars of past and present employment, with salaries, and accompanied by copies of three recent testimonials, must be received by the County Architect, County Hall, Beverley, not later than Monday, 3rd July, 1950. Applicants should disclose relationship to any member or senior officer of the Council, and canvassing will be a disqualification.

T. STEPHENSON,
Clerk of the County Council.
County Hall, Beverley.
June, 1950. 4593

Tenders for Contracts

6 lines or under, 12s. 6d.; each additional line, 2s.

COUNTY BOROUGH OF BURNLEY.
INFANTS' SCHOOL AT MYRTLE BANK.

Tenders are invited for the ERECTION of an INFANTS' SCHOOL for 240 PUPILS at MYRTLE BANK, BURNLEY.

Forms of Tender, together with Bills of Quantities, may be obtained on application to the Architects, Quiggin & Gee, F./F.R.I.B.A., 11, Old Hall Street, Liverpool, 3, on payment of a deposit of two guineas, which will be returned on receipt of a *bona-fide* Tender and the return of all documents.

Tender documents will be despatched on or about 3rd July, 1950, and should be returned to the Town Clerk, Burnley, in the envelope provided not later than noon on 17th July, 1950.

Drawings and conditions of Contract may be inspected during normal office hours either at the office of the Architects or at the Borough Engineer and Surveyor's Office, Nicholas Street, Burnley.

C. V. THORNLEY,
Town Clerk.
4524

BOROUGH OF WISBECH.
ERECTION OF FOUR AGED PERSONS' DWELLINGS.
CONTRACT NO. 40.

Tenders are invited for the Erection of Four Brick Aged Persons' Dwellings on the Mount Pleasant-Bath Road Housing Estate.

Contractors desirous of Tendering may obtain Plans, Specifications, Bills of Quantity and Form of Tender, together with particulars of site from the Borough Engineer and Surveyor, Mr. Gordon J. Wootton, M.I.Mun.E., Exchange Square, Wisbech, upon deposit of £1 1s., which will be returned, upon receipt of a *bona fide* tender, not subsequently withdrawn, and all other documents supplied.

Contractors wishing to tender for less than the Contract number of houses may tender for one pair, if so desired.

Tenders to be forwarded to the undersigned, in a plain sealed envelope, endorsed "Tender for Aged Persons' Dwellings," must be received not later than Wednesday, 19th July, 1950.

All documents are to be returned with the tender, and this is a condition of tender.

J. E. SIDDALL,
Town Clerk.
Town Hall, Wisbech.
16th June, 1950. 4584

Architectural Appointments Vacant

4 lines or under, 7s. 6d.; each additional line, 2s.

YOUNG ASSISTANT, interested in Ecclesiastical work required in private East Midlands office; student considered. Full particulars to Box 4167.

ARCHITECTURAL ASSISTANT, of Intermediate standard, required immediately by firm of Architects in West End of London; salary according to experience and qualification. Box 4403.

ARCHITECTURAL ASSISTANT required; Intermediate standard; small progressive London office. Write, stating age, experience, qualifications, salary, etc., Box 4463.

TWO ARCHITECTURAL ASSISTANTS required: one Senior and one Intermediate standard. Reply to P.O. Box 677, Nairobi, Kenya Colony, stating age and experience, when full particulars of service will be forwarded to suitable applicants. 4464

ARCHITECTURAL Staff required by London Firm of Architects: (*a*) CHIEF QUALIFIED ASSISTANTS, to take charge of large projects in London and the Provinces. (*b*) SENIOR ASSISTANTS, to work on schemes and working drawings. Please apply by letter, stating training, experience, age and salary required, Box 4430.

CHIEF ASSISTANT, with good all-round experience, capable of taking charge from sketch plan to final stage; good prospects, salary and bonus to right man. Write, stating age and experience, to: Bromley & Cartwright, 111, London Road, Derby. 4506

ARCHITECTURAL ASSISTANTS required in Architect's Department of engineering firm; must be experienced in industrial work and be capable of preparing Surveys, Working Drawings, Details, etc. Write, stating experience, age, salary required, and when available, to Chief Architect, Geo. Adlam & Sons, Ltd., Fishponds, Bristol. 4507

JUNIOR ARCHITECTURAL ASSISTANT required, up to R.I.B.A. Intermediate standard, for London office; capable of executing working drawings, etc.; to start immediately; interesting work, and scope for applicant showing initiative. Apply in writing, stating age, training, experience and salary required, to: Elie Mayorcas, F.R.I.B.A., 13, David Mews, W.1. 4491

GOOD ARCHITECTURAL DRAUGHTSMAN for large practice; survey experience essential; pleasant 2-bedroom flat available. R. & D. Hall, F./A.R.I.B.A., Masonic Buildings, Bangor, N. Wales. 4495

QUALIFIED SENIOR ASSISTANT required for provincial private practice with varied works in hand; pleasant 5-room flat and garage provided. Apply, giving full particulars and salary required, to Deacon & Laing, 9, St. Paul's Square, Bedford. 4489

SENIOR ARCHITECTURAL ASSISTANT required by Architect to London Brewery; must be a practical and good draughtsman, experienced in construction, and aged not under 35 years; salary £600 to £700. Write, stating age, training, qualifications and experience, to Box 4518.

SENIOR ASSISTANTS required in Architect's office of large commercial institution in London; preference will be given to men of R.I.B.A. Final standard, about 35 years old, who are experienced in the design and supervision of good class buildings, specifications, and maintenance work; permanency and allowance following retirement offered to suitable applicants. Write, without submitting testimonials but giving particulars of past work and stating salary required, Box 4407.

WANTED, immediately, experienced ARCHITECTURAL DRAUGHTSMAN, for general private practice in small office in Bloomsbury area. Telephone Chancery 7915 for appointment. 4576

EXPERIENCED ARCHITECTURAL ASSISTANT, preferably A.R.I.B.A., required at Rugby; basic salary scale equivalent Local Authority; Staff Superannuation scheme in line with Local Authority; profit sharing scheme; variety of experience in private practice. Apply first place, stating age, experience, qualifications, and salary required, to Douglas J. Oliver, 10, St. Matthew's Street, Rugby. 4360

SENIOR ARCHITECTURAL ASSISTANT required by firm of West End London Chartered Architects and Surveyors; salary £700; possibility of convenient maisonette at low rental if required. Box 4554.

AN ARCHITECTURAL ASSISTANT, of Inter. R.I.B.A. standard, required for private practice near Victoria; experience in detailed design and layout of housing schemes and multi-storey flats essential. Experience and salary to Box 4560.

ARCHITECTURAL ASSISTANT required; Intermediate Final standard.—Poulton & Freeman, F./F.R.I.B.A., 15, Robert Adam Street, W.1. (WEL. 8998). 4568

EXPERIENCED ARCHITECTURAL ASSISTANT required for Country Town office; car driver; salary £450, plus rent free flat (if married); £500 (if single). Reply with full details to Box 4577.

ASSISTANT ARCHITECT required in general office, Curzon Street, W.1; one accustomed to conversion work an advantage; age 27-35; salary £500-£600, according to experience; applicants should state previous experience, appointments held; pension facilities after 12 months' service. 4580

ARCHITECTURAL ASSISTANT required for work in connection with Local Authority and private Housing, Factories, Churches, Farm Buildings, etc.; applicants need not be qualified, but must be competent to handle projects throughout with the minimum supervision; salary up to £500, dependent upon ability. Write to D. C. Denton-Smith, L.R.I.B.A., Chartered Architect, 40, Regent Street, Cambridge. 4579

ARCHITECT'S ASSISTANT required in London office for Schools project; high standard of draughtsmanship and sound knowledge of construction essential. Write, stating experience, qualifications and salary required, Box 4589.

Architectural Appointments Wanted

ARCHITECT, with many years' varied and extensive experience, seeks responsible position, with good prospects; capable of taking complete charge of busy office, and seeing jobs through from start to finish; please state salary, etc. Box 540.

ARCHITECTURAL STUDENT (25), passed Pt. I Final, 7 years' varied office experience, seeks position in general architectural practice. Box 541.

A POSITION as SENIOR ARCHITECTURAL ASSISTANT is required by A.R.I.B.A., Dipl.Arch., on work of contemporary design (London area); 4 years' experience on housing, schools, and light industrial schemes, including specification and supervision. Box 542.

Other Appointments Vacant

4 lines or under, 7s. 6d.; each additional line, 2s.

INTELLIGENT and enthusiastic, young man, with some knowledge of building construction and materials, wanted for unusually interesting selling job, mainly in London (full-time). Write, with full particulars of age, training, experience, salary required, to Box 366.

ARCHITECTURAL Metalworkers require a DESIGNER-DRAUGHTSMAN of considerable merit; top salaried position for skilled man. Apply The Morris Singer Company, Hope House, St. Peter Street, Westminster, S.W.1. 3564

SETTER-OUT wanted for Architectural Metalwork; good wages and ideal working conditions. Apply: The Morris Singer Co., Ltd., Ferry Lane, Forest Road, Walthamstow, E.17. 3524

MAJOR Building and Civil Engineering Contractors require QUANTITY SURVEYORS for service in the Middle East; good salaries, plus adequate cost-of-living allowances payable; contract for term of 2½ years; age not over 43; no wives and/or families on initial contract; free passages out and home; kit allowance.—Apply in writing, giving full details of age, experience, qualifications, etc., to Box 4575.

SURVEYOR required by well-known West End Firm extending their practice, with recent experience of carrying out surveys, dilapidations and preparation of plans for conversions. Write, stating age, experience, and salary required, to Box 4588.

A JUNIOR required in Architect's office near Victoria; must have matriculated; will be expected to train for R.I.B.A. exams. Write details of age, school, certificates held, and salary required, to Box 4561.

LAND AND BUILDING SURVEYOR required by Architect to London Brewery; must have a good knowledge of the Town and Country Planning and London Building Acts; applicants should have considerable practical experience of all applications made to County Councils, Local Authorities, and the Licensing Justices, and be capable of preparing surveys of structures and schedules of dilapidations; salary £700 to £800. Applications, stating age, training and experience, to be made in writing to Box 4519.

WANTED.—ARCHITECTURAL DRAUGHTSMAN, with experience in structural steelwork, reinforced concrete and orthodox building, for industrial projects; opportunity for site experience; qualification at least Inter. R.I.B.A.; age 25-30 years. Write, giving fullest details and salary required, to Personnel Officer, British Cellophane, Ltd., Bath Road, Bridgwater, Somerset. 4530

THE CO-OPERATIVE WHOLESALE SOCIETY, LTD., invite applications for the following appointment on the Staff of the Manchester Architect's Department:—

ASSISTANT QUANTITY SURVEYOR. Salary range £510 to £625 per annum. Applicants must have a sound experience in the preparation of Bills of Quantities, measuring and adjusting variations for large commercial buildings, and able to undertake work with a minimum of supervision.

The above appointment is permanent, and offers prospects of up grading to a competent Assistant. The successful candidate will be required to undergo a medical examination for entry into compulsory Superannuation Scheme.

Applications, stating age, experience, qualifications and commencing salary required, to be addressed to the Chief Architect, Co-operative Wholesale Society, Ltd., 1, Balloon Street, Manchester, 4. 4555

DETAIL DRAUGHTSMAN required for Architect's London office; salary according to qualifications. Write Box 4590.

IMPERIAL CHEMICAL INDUSTRIES, LTD., WILTON WORKS.
ADVERTISEMENT REF. ICI/X/63.

IMPERIAL CHEMICAL INDUSTRIES, LTD., Wilton Works, near Redcar, invite applications from DRAUGHTSMEN to assist with the design and detailing of a large chemical factory under construction. Good working conditions include 5 day/39 hours week and superannuation scheme.

Vacancies exist in the following categories:—

STRUCTURAL.—Design of steel work and reinforced concrete, and the complete design of industrial buildings.

ARCHITECTURAL.—Design of offices, laboratories, canteens, welfare and general industrial buildings.

Applications, quoting advertisement reference No. ICI/X/63/k, should be addressed to the Staff Officer, Imperial Chemical Industries, Ltd., Wilton Works, P.O. Box 54, Middlesbrough, Yorks. 4587

Services Offered

4 lines or under, 7s. 6d.; each additional line, 2s.

MANUFACTURERS of exclusive hand-made Lampshades; architects' contracts carried out. J. & M. Beagley, 51, Great Ormond Street, London, W.C.1. CHAncery 8959. 2397

PRIVATE EVENING TUITION on CONTEMPORARY ARCHITECTURAL PLANNING and DESIGN by Architect with wide experience, including Continental practice. Applications from enthusiastic and progressively minded Post-Graduates and Students considered. Box 4544.

ARCHITECTURAL MODELS and Dioramas. Edward J. Ashenden, A.R.C.A., 15, Chenil Studios, 183, Kings Road, S.W.3. Tel.: Flax 6103. 2566

NOTICE TO ARCHITECTS.—Builder, with good tradesmen, plant, and transport, now in a position to accept War Damage and Maintenance repairs. Hawkes, 63, Hogarth Gardens, Heston, Middx. HOU. 1667. 434

TWO ARCHITECTS, raising capital to start own business, will do any kind of work this summer; no job would be too dull or awkward for us to handle. Write J. M. Squire, 18, Harwood Avenue, Bromley, Kent. Or ring RAVensbourne 2251 after 1 p.m. 4471

FREE-LANCE Surveyor offers Services to Architects requiring accurate surveys of land and buildings, levelling, contouring, etc.; own car and complete equipment. 2772

LADY SECRETARY/SHORTHAND-TYPIST, car driver, some knowledge of construction and drawing, seeks responsible post, preferably out of London. Reply to Box 4556.

ASSOCIATE (35), comprehensive experience, seeks progressive appointment (preferably private practice), Cheltenham area. Box 4591.

For Sale or Wanted

4 lines or under, 7s. 6d.; each additional line, 2s.

"ELFIX" Insulated Floor Batten Fastener; low in cost and used on leading schemes. Details G. Paget Ellis & Co., Ltd., 7, Oxford Street, Leamington. 3998

SLATES.—All types Asbestos and Welsh, including Diagonal's; Corrugated and Flat Asbestos Sheets. G. Paget Ellis & Co., Ltd., 7, Oxford Street, Leamington. 3999

TO CLEAR (owing to Town and Country Planning we are removing to the Great West Road).

TUBULAR SCAFFOLDING, ALUMINIUM AND STEEL FOR BULL AND COW PENS, RACKING, FENCING, etc.; TARPAULINS; EXTENSION AND POLE LADDERS; SCAFFOLDING; BOARDS; PAINT; ASBESTOS SHEETS, FLAT AND CORRUGATED; BEDSTEADS; ANGLE IRON; FENCING STAKES; STEEL BUILDINGS; CORRUGATED IRON SHEETS; CANTEEN TABLES and FORMS; CHAIN LINK FENCING; CARPETS; TABLECLOTHS; BOILER SUITS; OILSKINS; OVERALLS; TRUSSES; HUTS, etc.

For further particulars write:
NORDA (GT. BRITAIN), LTD.,
162-166, Broadway, Southall, Middlesex.
Tel.: Southall 3755 and 3227/8. 'Grams: "Norda," Southall. 4435

SPECIAL OFFER.—Large quantity Interlocking Panels for disposal, licence free; size 3 ft. 5 in. by 1 ft. 11 in. by 2½ in., faced both sides; rapid construction by semi-skilled labour; suitable for partitions, cubicles, shop window backs, etc.; ready for paint or distemper finish. Apply 76/78, High Street South, London, E.6. 4578

DUMPY LEVEL (needs new crosswires in lens), otherwise perfect; complete with tripod, staff, six 6ft. ranging rods and chain; £75, or offer. Box 4557.

Miscellaneous

4 lines or under, 7s. 6d.; each additional line, 2s.

A. J. BINNS, LTD., Specialists in the supply and fixing of all types of fencing, guard rail, factory partitions and gates. Harvest Works, 99-107, St. Pauls Road, N.1. Canonbury 2061.

The Race Upholstery Unit will be pleased to report on and tender for your specialised upholstery requirements and repairs. 22, Union Road, Clapham, S.W.4. 4048

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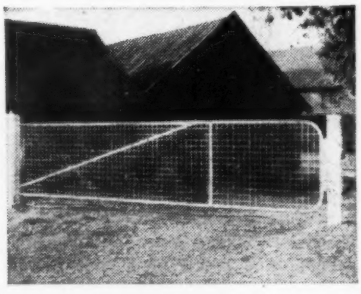
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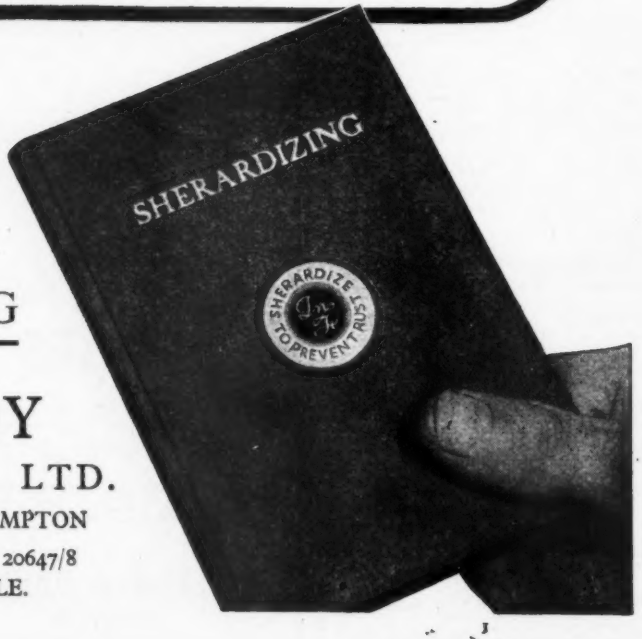
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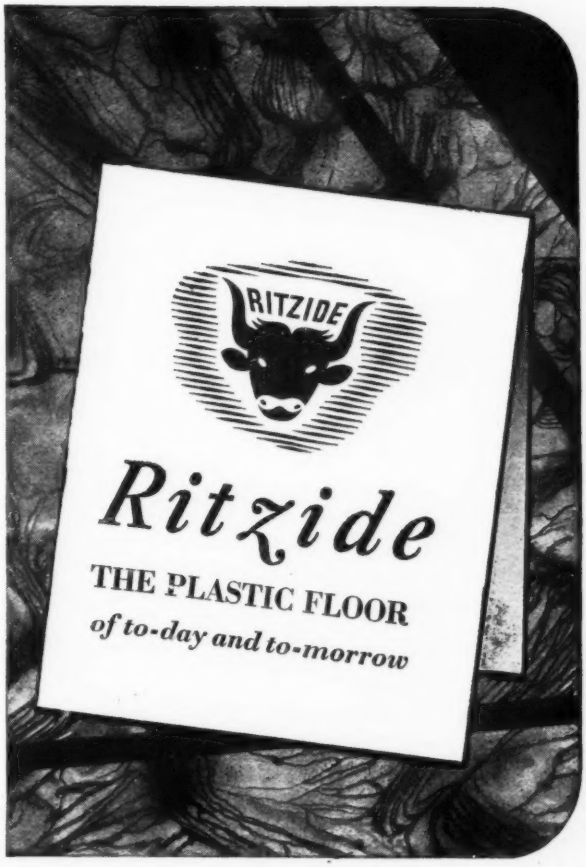
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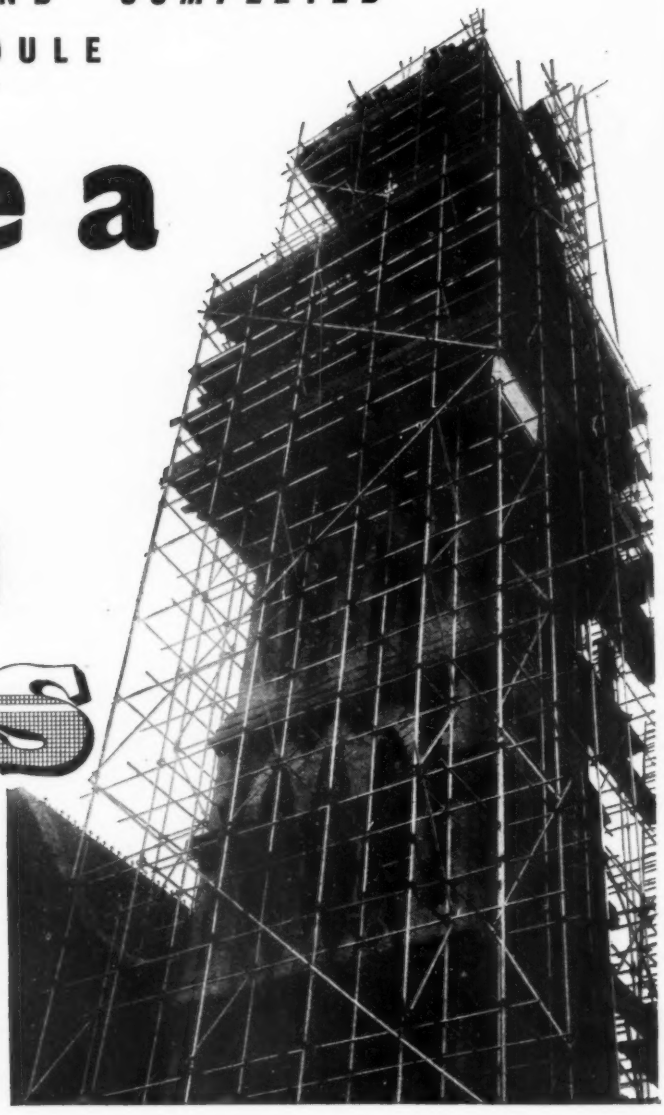
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